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ABSTRACT

This teacher's guide accompanies a program designed to teach water and boating safety to students in grades 3-5. The written curriculum accompanies a video, AquaSMART 3-5. The theme of the curriculum is AquaSMART. To become AquaSMART, students must learn 10 basic lessons for water and boating safety. The written curriculum begins with an overview of the presence and importance of water in Texas. It expands on the 10 lessons found in the video: Learn to Swim; Wear a Life Jacket; Learn to Float; Reach, Throw, or Row; Look Before You Leap; Don't Overload Your Boat; Stay With Your Boat; Learn Boating Rules of the Road; Alcohol, Drugs and Boating Don't Mix; and Be Polite, Don't Pollute. In each lesson, students learn that the way to become AquaSMART is to learn to follow the rules. The video introduces Splasher the frog and his friends, Surfer and Diver. Splasher is the central character in the video and written curriculum. He and his friends draw students' attention to the activities and important information. The characters are students in grades 3-5 who portray the themes of each lesson. The written curriculum repeats and supplements the AquaSMART lessons contained in the video. The curriculum includes an instructor's guide, student activities, reproducible activity sheets. Teacher and student evaluation forms are included in the packet. (SM)

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Aqua SMART

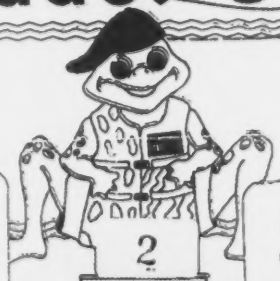
"The program that shows you how to be smart when playing in and around water!"

Teacher's Guide

Water & Boating Safety

Grades 3-5

SP038277



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US Army Corps of Engineers
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Teacher's Notes

☐ OVERVIEW

Objective. To teach boating and water safety to students in grades 3-5.

☐ CURRICULUM THEME: AquaSMART

The theme of the curriculum is **AquaSMART**. To become **AquaSMART**, the students are taught 10 basic lessons for boating and water safety. In each lesson, the students learn that the way to become **AquaSMART** is to learn and follow the rules. In this series, students learn that:

Boating and water sports can be fun.
Boating and water sports can be dangerous.
Boating and water sports can be safe, if you follow the rules.

☐ THE CURRICULUM CONTENT

This curriculum, designed to accompany the video, "**AquaSMART**", is divided into an introduction and 10 **AquaLESSONs**. The introduction, the only departure from the video, teaches students about the distribution and importance of water in Texas, and contains information about the geography, history, and uses of water. In this lesson, students learn that to be **AquaSMART**, they must learn to preserve and conserve water.

In both the video and the written curriculum, the 10 lessons cover the same central rules. The written curriculum, however, expands on the 10 lessons, and contains activities designed to help the students discover the correct lessons and, once learned, to reinforce them through review and association with events with which they are already familiar. The 10 lessons are:

Learn to Swim
Wear a Life Jacket
Learn to Float
Reach, Throw, or Row
Look Before You Leap
Don't Overload Your Boat
Stay With Your Boat
Learn Boating Rules of the Road
Alcohol, Drugs and Boating Don't Mix
Be Polite, Don't Pollute

In the written curriculum, the 10 lessons are supplemented by additional safety rules that apply to water and general safety. For instance, in the Learn to Swim **AquaLESSON**, the rules are expanded to include obeying pool safety rules, and listening to a responsible adult. In as many cases as possible, the **AquaLESSON** safety rules apply to other than boating situations, reinforcing safe behavior in all situations.

THE CURRICULUM FORMAT

The curriculum is designed to repeat and supplement the **AquaLESSONs** contained in the video, "**AquaSMART**". In the video, Splasher the Frog[1] and the **AquaSMART** Team are introduced. Splasher is the central character in the video, and is used in the curriculum to draw the students' attention to **AquaHAZARDs**, **AquaCLUEs**, and other important information. The **AquaSMART** Team, stars of the video, are students in the 3rd to 5th grade who portray the themes of each **AquaLESSON**. The live action of the **AquaSMART** Team in the video is captured by still photographs placed throughout the written curriculum.

The curriculum consists of a teacher's manual and student activities. Worksheets for many of the student activities are at the end of each lesson. The worksheets can be duplicated and distributed to the students, or copied for board work.

The curriculum suggests using guest speakers for classroom presentations. Speakers from local aquatic and boating organizations, businesses, and government agencies can be a significant addition to any water safety program. Following is a list of possible resource agencies. Whenever possible, contact them to help identify local aquatic and boating needs and problems.

Lifesaving and First Aid	American Red Cross, Fire Department, Law Enforcement Agencies, Lifeguards, Emergency Medical Services, Search and Rescue Groups, Boy Scouts, Girl Scouts
Watercraft and Boat Handling	U.S. Coast Guard, U.S. Coast Guard Auxiliary, U.S. Power Squadrons, Local Marine Enforcement Patrol, Local Marine Dealers, Boat Dealer Associations, Boating and Personal Watercraft Clubs, Boat and Equipment Manufacturers, Commercial Boat Operators, Yacht Clubs, Aquatic Centers, Texas Parks and Wildlife
Safety Afloat	U.S. Coast Guard, U.S. Coast Guard Auxiliary, U.S. Power Squadrons, Local Marine Enforcement Patrol, Aquatic Centers, Texas Parks and Wildlife
Locks and Dams	U.S. Army Corps of Engineers, U.S. Coast Guard

[1] The name "Splasher" courtesy of the Modesto Irrigation District.

AquaLESSONs

The overall objective of the curriculum is to teach students water safety. These lessons are important to students who do not live near water because they are less likely to learn safe habits from experienced boaters and swimmers.

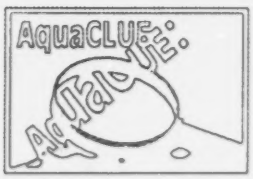
The **AquaLESSONs** are divided into the following sections:

AquaHAZARDs, AquaCLUEs, AquaLEARN, AquaFACTs, AquaSMART, and **AquaNETTING**

Each **AquaLESSON** begins with an introduction containing the objectives of the lesson, a summary of the lesson content, and a list of materials necessary to complete the activities.

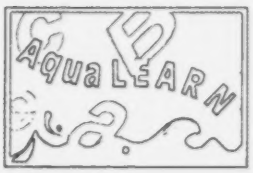
AquaHAZARD

AquaHAZARDs consist of a story about the **AquaSMART** Team's adventures. The stories repeat **AquaLESSONs** presented in the video, or if no story is presented in the video lesson, a story is developed for the written curriculum. Each **AquaHAZARD** ends with a question. This helps the students frame the problem and prepares them for the **AquaCLUEs**. The story can be read to the students, or if the teacher prefers, a reprint of the story at the end of each lesson can be duplicated and passed out to the students for them to read.



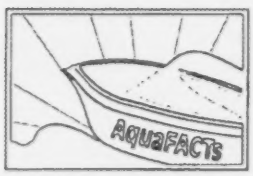
AquaCLUE

The **AquaCLUEs** are designed to introduce the correct solutions to the **AquaHAZARDs**, and to reinforce the lessons. Activities have been prepared for each **AquaCLUE**. The activities may be used as individual desk work, group activities, or ideas for field trips, depending on the grade level of the class and the time the teacher wishes to spend on the lesson. Activity sheets can be reproduced as overheads for class activities. The teachers can select the activities that are appropriate to the grade level being taught. The time for each activity is estimated but may vary.



AquaLEARN

The **AquaCLUEs** are followed by **AquaLEARN**, an activity that serves as a vocabulary and spelling expander. The words can be taught within the context of the **AquaLESSONs**, or be added to the general spelling list.

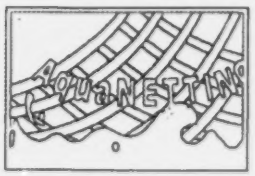


AquaFACTs

AquaFACTs provide information about boating, proper boating behavior, and boating laws. These facts can be used to expand the activities. **AquaFACTs** may be used to reinforce the lesson, provide content for a letter home to the family, or serve as suggestions for a poster or story writing activity.

AquaSMART

AquaSMART is the goal. Each **AquaLESSON** ends with a review of the rules learned. Students are reminded that it is **AquaSMART** to learn the rules and to follow them. If the school has access to a computer, the **AquaSMART** section can be made into a banner that serves as the "slogan for the day."



AquaNETTING

AquaNETTING is designed to bring important information home to families, and to introduce the students to related literature selections. Books that are easy to read have been identified. **AquaNETTING** is an important part of the curriculum as the safety rules must be reinforced by the family and responsible adults. Many of these activities can be used as "Family homework," so that students can bring information to their parents and return to class to share the parents' ideas with the class.

☐ EVALUATION

Evaluation forms for teachers and students are located at the end of this manual. The forms are self-mailers. Please complete, fold, and return to Texas Parks and Wildlife, 4200 Smith School Road, Austin, Texas 78744; FAX 512-389-8042; E-mail tspice@tpwd.state.tx.us.

☐ CERTIFICATE OF COMPLETION

The curriculum includes a certificate that can be reproduced and given to the students.

SUGGESTED TEACHING FORMAT

☐ INTRODUCTION

This unit can be introduced alone or combined with other geography, history, or environmental lessons. The unit is designed to help the children understand the presence and distribution of water in Texas, as well as the importance of water to Texas residents. It is suggested that the facts and concepts in this unit are introduced before the lessons on water safety.

AquaLESSONs 1 and 2 are the most important units, and should be introduced first, as many of the succeeding lessons refer back to these basic lessons: learn to swim, and wear a properly fitting, Coast Guard-approved life jacket.

AquaLESSONs 3-10 are stand-alone units. They may be taught in sequence or integrated into other health and environmental lessons being taught as a regular part of the curriculum.

☐ FRAMEWORK FOR TEACHING AquaSMART

The **AquaCLUEs** contained in the **AquaSMART** water safety curriculum include Math, Science, Social Science, English and Language Arts activities, and Art and Fun. Teachers can select the activities that will work best for their grade level. The following framework can be adapted to those supplied by the Texas Education Agency.

Teachers are encouraged to expand the parts of the curriculum most applicable to these students' experience. For instance, teachers may want to introduce safety tips for water activities that are popular in their area. This can be accomplished by expanding specific parts of the curriculum, or introducing local water sports features and facts.

Also, teachers are encouraged to turn activities written for individual students into group activities by making overheads out of activity sheets, introducing role playing ideas, and sharing and evaluating discussions and ideas.

☐ ENGLISH-LANGUAGE ARTS

Students at the 3rd to 5th grade level are becoming increasingly interested in the world about them; the world beyond their immediate environment. Students at this level continue to be interested in hearing literature read aloud daily, and to formulate and share ideas with each other in small-groups through work activities and discussion. They are interested in sharing ideas, and should be encouraged to make formal presentations. At this level, students need to learn that writing is integral to learning, and should be encouraged to rethink, rearrange, and to polish words.[2]

[2] The California Department of Education, *English Language Arts Framework*, Sacramento, 1987.

SUGGESTED TEACHING FORMAT

The AquaSMART curriculum is designed to:

- ***ENCOURAGE*** the art of questioning.
- ***HELP*** students discover how good listeners, speakers, readers, and writers accomplish their ends in communicating with others.
- ***DEVELOP*** composition skills such as summarizing, analyzing, comparing, and contrasting.
- ***LEARN*** oral language skills through description and oral reading.[3]

☐ SOCIAL SCIENCES

Students in Grade 3 can begin to think about continuity and change in their own community as well as in the nation. Throughout Texas, the geographic setting has had important effects on the lives of the residents, influencing how communities develop and maintain themselves. Third graders are ready to learn about the major natural geographic features around them, and to consider the impact of those features on their lives.[4]

The **AquaSMART** curriculum is designed to introduce the students to water as a geographic feature, and to help them discover that there is great variety in the types of water and the uses of water. The students learn that water can be fun and dangerous: they are responsible for learning the rules that enable them to use the waterways safely. The activities for this grade level contain concrete examples from which the students can learn.

Students in Grades 4 and 5 are becoming increasingly abstract and multidimensional in their thinking. As they mature, they are able to engage in comparative analyses and deductive reasoning. Students can begin to draw inferences from events, and reach conclusions from data.[5]

The **AquaSMART** curriculum introduces students at these grade levels to reasoning from "if I do this" to "then this can happen". This exercise is used to help students learn that their behavior has consequences for their safety, for the safety of others, and for the environment.

☐ MATHEMATICS

Students from Kindergarten through 5th grade are interested in sorting and classification. These activities are profoundly associated with more formal logical thinking that develops in the later middle school years. In these grades, students can learn to use numbers to clarify ideas, record and develop a classification system, and expand their understanding of the meaning of numbers. Also, students can learn the process of measurements, such as length, weight, and time, and to describe an object by those measurements. Grade 3 students can investigate the different ways to display information in tables and graphs, and to categorize and interpret data. By Grade 4, students can participate in the selection of a question to be answered, the collection of the data, and the analysis. Grade 5 students can examine survey findings from the media and speculate how these findings were determined.[6]

The **AquaSMART** curriculum and activities introduce the students to actual mathematical computation and measurement, identification of geometric shapes, the identification of research questions, data collection and reporting, and the use of graphs to learn, compare, and convey information.

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3 Ibid., pp.14-18.
4 The California Department of Education, *History, Social Science Framework*, Sacramento, 1988, p.40.
5 Ibid., p.44.
6 The California Department of Education, *Mathematics Framework for California Public Schools*, Sacramento, 1992, pp.110-118.

SUGGESTED TEACHING FORMAT

☐ SCIENCES

In grades 3-5, students are interested in how humans interact with other living things. At these grade levels, students understand that humans are part of the biosphere and are dependent on it. Because they depend on the earth's resources, the students should learn that humans need to exercise judgment, care, and planning in their use of natural resources, including plants, animals, soil, and water. This care and planning extends to the practices of disposing waste, as carelessness destroys the natural habitat of animals and the ecosystems that sustain our lives.[7]

The **AquaSMART** curriculum emphasizes the dependence of humans on water, and the need to conserve and preserve that resource. The students learn that water plays a major role in the recreational, industrial, and agricultural industries in Texas, as well as being a necessity in their daily lives.

☑ INTEGRATING THE CURRICULA

The following chart suggests possibilities for integrating the **AquaSMART** curriculum with other school topics. The **AquaSMART** curriculum is divided into several categories: Texas, Decision Making, Skills Preparation, Substance Abuse, Preservation/Conservation, and Self-Discovery. The subjects with which these categories can be integrated include Science and Health, Math, Social Science, Writing and Language Arts, and Art and Fun.

☒ CERTIFICATE OF COMPLETION

A Certificate of Completion is included. The certificates can be signed and given to each student.

[7] The California Department of Education, *Science Framework for California Public Schools*, Sacramento, 1990, pp. 124-125.

INTEGRATING AquaSMART WITH OTHER CURRICULUM

	Science/ Health	Math	Social Science	Writing/ Language Arts	Art and Fun
Texas	Texas Waterways Clue 1	Texas Waterways Clue 1,4	Texas Waterways Clue 2, 3		
Decision Making	Lesson 5, Clue 3 Lesson 7, Clue 1	Lesson 9, Clue 2	Lesson 7, Clue 2 Lesson 9, Clue 1	Lesson 2, Clue 3, 4 Lesson 7, Clue 4	Lesson 5, Clue 4 Lesson 7, Clue 3
Skills Preparation	Lesson 1, Clue 2,3,4 Lesson 4, Clue 1, 4 Lesson 6, Clue 1 Lesson 8, Clue 1	Lesson 1, Clue 1 Lesson 6, Clue 4	Lesson 5, Clue 2 Lesson 6, Clue 3	Lesson 2, Clue 1 Lesson 3, Clue 3 Lesson 5, Clue 1 Lesson 6, Clue 2 Lesson 8, Clue 4	Lesson 8, Clue 2,3
Substance Abuse	Lesson 9, Clue 2 Lesson 9, Clue 3	Lesson 9, Clue 1 Lesson 9, Clue 4			Lesson 9, Clue 3
Preservation/ Conservation	Lesson 10, Clue 1		Lesson 10, Clue 4	Lesson 10, Clue 2	Lesson 10, Clue 3 Lesson 10, Bonus
Self-Discovery	Lesson 1, Clue 1 Lesson 2, Clue 2 Lesson 3, Clue 1, 2 Lesson 4, Clue 2			Lesson 3, Clue 4	Lesson 4, Clue 3

8

The Waterways Of Texas

☐ **INTRODUCTION**

Objective. Provide an overview of the presence and need for water in Texas.

☐ **Summary.** This **AquaLESSON** introduces students to the waterways of Texas, their importance to Texans, and the need to preserve and conserve this resource. This lesson teaches students about the different types and uses of water. They also learn to recognize the role of these waterways in the recreational life of Texans, the prominence of this resource in the geography and history of Texas, the importance of this resource to sustaining life and their responsibility for the future of water in this state. Finally, the lesson makes the transition between the Introduction and the 10 **AquaLESSONs** by introducing the need for water safety.

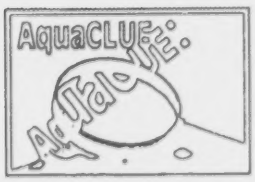
☐ **Storyline.** This story introduces the students to a member of the **AquaSMART** Team, Kristin. The night before Kristin participates in her first **AquaSMART** Team practice, she dreams that all the water in Texas disappears. The immediate problem for Kristin is missing the **AquaSMART** Team practice. But the lesson goes further. It asks the students to imagine what Texas would be like without water.

A BAD DREAM

*Kristin joined the **AquaSMART** Team at school. She had been taking swimming lessons and her teacher thought that Kristin was ready to participate in water sports with other students her age. Tomorrow was the first day that she would meet her teammates, and begin to practice for the swim meets that were planned for the Spring. Kristin was very excited, and had a hard time falling asleep.*

*After awhile, Kristin fell asleep. Even though she was asleep, she could not stop thinking about the next day. Soon, she began to dream, and in her dream all the water in Texas disappeared. In her dream, Kristin was very sad, because there was no water for swimming, no **AquaSMART** Team and no Spring swim meets.*

Luckily, Kristin was only dreaming. The next morning, there was water for brushing her teeth, her father's coffee and the dog's water bowl. But what if it hadn't been a dream? What would Texas look like if there was no water in the state?



The purpose of the **AquaCLUEs** is to help the students discover the importance of water to the development and existence of the state. Also, the **AquaCLUEs** help the students relate the importance of water to the geography, history and economy of Texas.

First AquaCLUE: *How Much Water Do I Need?*

☐ **Materials:** Worksheet 1.

Life for the students would be quite different without water. The students are asked to catalog and estimate the amount of water they use over a 3-day period.

☐ **Time:** One 20-minute period to introduce unit, 45 minutes to calculate and complete the worksheet.

This **AquaCLUE** teaches the students to collect data about their daily water requirements, and to measure approximately how much water they use each day. Distribute Texas Waterways Worksheet 1 and explain that the students are to record their water use for three days. At the top of the page, they should enter the day's date and the time they begin and the date, three days later, as well as the time the project ends.

Then, ask the students to list their daily activities for which they require water in the first column. Ask the students to work in small groups so that they can share their experiences, and ensure that the major water uses are included on all worksheets. The listed activities can include drinking, bathing, brushing teeth, washing dishes and clothes and flushing the toilet.

When the students have completed their list, instruct them to put a hash mark (I) for each time they performed one of the water related activities. They are to continue to put hash marks in the column for the full three days. If the students mentioned watering the garden, remind them to enter the number of minutes they water each time.

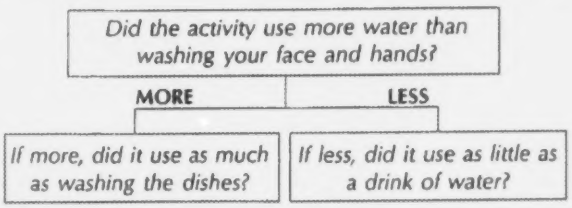
When data collection has been completed, list the following water uses and the average amount of water used each time on the blackboard.

Water Use Average Amount

Bathing	25 gallons for each bath
Showering	50 gallons per shower
Flushing the toilet	5 gallons
Washing face/hands	2 gallons
Getting a drink	1/4 gallon
Brushing teeth	1/4 gallon
Washing clothes	40 gallons for each load
Watering the garden	10 gallons a minute
Cooking	10 gallons
Washing dishes	10 gallons
Other	15 - 60 gallons

Source: *The Official Captain Hydro Water Conservation Workbook.* p. 22.

1. Have the students enter the average number of gallons for each activity in the third column. Be sure they understand how to calculate the number of gallons for watering the garden (minutes x number of hash marks). If the students have listed water uses for which no average amount has been given, have them estimate the gallons. To obtain an estimate, ask the students the following questions:


Did the activity use more water than washing your face and hands?
MORE
LESS
If more, did it use as much as washing the dishes?
If less, did it use as little as a drink of water?

Encourage the students to decide how much water was used based on those activities.

2. Instruct the students to multiply the number of gallons by the number of hash marks or minutes in the second column. Place the number in the column for total gallons.

3. Finally, ask the students to add the total gallons column to see how much water they used in three days. Complete the lesson by reminding the students that without water, we could not live and that if water were severely limited, our daily activities would be quite different. Remind the students to conserve water so that there will always be enough for everyone.

Second AquaCLUE: *What Does Texas Look Like?*

☐ **Materials:** Worksheet 2, topographic map of Texas or a map that shows the geographic features of the state.

☐ **Time:** 45 minutes

Ask the students if Texas would look any different if there was no water. This **AquaCLUE** helps the students understand that water shapes the land. This activity teaches that water not only sustains life, but creates the habitat for plants, animals and humans.

Draw the student's attention to a topographic map of Texas, or any map of the state that shows its geographic features. Have the students identify the water features. They should mention lakes, rivers, oceans, canals and ponds.

Explain that water shapes the land, and plays a major part in the development of many of the topographical features in Texas. Have the students identify some of those topographical features. They should mention beaches, canyons, flood plains, valleys, wetlands, cliffs and mountains.

Introduce the idea that it is the "shape" of the land that determines who and what lives there. For instance, geese migrate to wetlands, farmers plant crops in valleys and flood plains, children play on beaches, birds nest on cliffs and hikers hike up mountains. Earthquake and floods shape the land, also. Recent events of this kind are forcing government to reconsider areas where it was formerly thought to be safe to build houses and schools.

Distribute Texas Waterways Worksheet 2, What Does Texas Look Like? Explain that they will be developing a word web to show the relationship between water and the shape of Texas. The purpose is to help the students make connections between water and daily activities.

Point out that the center of the web contains the word water. Explain that water is the center of life, and that without it, nothing can live. Emphasize that water is necessary for life.

Instruct the students to enter the types of water in the spaces around the center of the web. They should include lakes, bays, rivers, irrigation canals, ponds and ocean.

The next ring contains a number of places to enter who and what is sustained by the water. For instance, a river sustains fish, bird life and water plants; the ocean sustains fish, birds and surfers; and so on. As the students enter a type of water in the first ring, instruct them to write in the names of up to 3 things that body of water supports.

End the activity with the reminder that water shapes the habitat and shapes the land. Without water, Texas would look very different.

Third AquaCLUE: *Who Came to Texas?*

☐ **Materials:** Worksheet 3, Resource books about Texas' history.

☐ **Time:** 45 minutes

This **AquaCLUE** shows the influence of water transportation on the early history of Texas and on Texas' economy. The **AquaCLUE** emphasizes that many different kinds of people came to Texas for many different reasons.

Explain that this is a research activity, and introduce the students to the class texts and the books listed in the Children's Literature Selection in **AquaNETTING**. The books contain the information they will need for completing Texas Waterways Worksheet 3.

Draw the students' attention to the column, "Who Came to Texas?" That column lists miners, fur traders, farm workers, railroad workers, ranchers and fishermen.

Ask the students to find the information for the next three columns, and write that information in the appropriate column. The second column asks where each group came from. The third column asks how migrants came to Texas. The fourth column asks the students to think about the role of water for each group. Teachers are encouraged to add groups to this exercise about whom the students have been studying.

The columns should include the following information:

Sea Explorers	All over the world	Ocean ships	Fish all gulf resources
Fur traders	Russia	Ocean ships	Habitat for fur-bearing animals
Railroad workers	China	Ocean ships	System of railroads
Farm workers	Mexico, Japan, Philippines	Ocean ships	Water for crops
Ranchers	Italy	Ocean ships	Water for animals, crops, orchards
Fishermen	Portugal	Ocean ships	Habitat for fish

Fourth AquaCLUE: *Why Be AquaSMART?*

☐ **Materials:** Worksheet 4, graph paper.

☐ **Time:** 45 minutes

This **AquaCLUE** introduces the students to being **AquaSMART**. The primary reason why they should be **AquaSMART** is to have safe boating and water sport experiences.

Ask the students to volunteer something about the water-related activities in which they have participated. The responses can include boating, swimming, or farming. Direct the students' attention to boating and take a survey. Record the answers on the blackboard. Ask:

How many students have ever been on a boat?
What kind of boat was it, motor, sail, or paddle?
Did the boat go on a river, ocean, or lake?
Do they know what a canal looks like?
How many students would like to have their own boat when they grow up?

Emphasize the need to learn boating safety early and from a qualified teacher. Tell the students that the reason is to prevent boating accidents.

Distribute Texas Waterways Worksheet 4, and a piece of graph paper. Explain that the students are to make a horizontal bar graph. Numbers can be rounded for students in the lower grades.

1. At the top of the graph paper, write the heading "Boating Accidents."

2. Instruct the students to develop a 5-point scale on the bottom of the graph. Start the scale with 0 and continue with 5, 10, 15 . . . to 40 percent. Label the scale "Percent."

3. Label the vertical Axis, "Type of Accident". List the type of accidents, leaving at least 3 lines for each bar, and one line in between the bars.

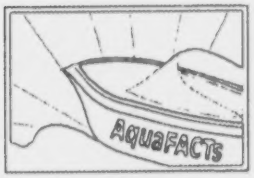
4. Draw the length of the bar so that the percent on Texas Waterways Worksheet D corresponds to the scale on the horizontal axis.

5. Ask the students to write in the source of the data at the bottom of the graph. For the source of the data, draw the students' attention to the footnote on the worksheet.

6. Discuss the graph with the students. Ask them to answer the questions at the bottom of the worksheet. Help the students make the connection between accidents and the need for water safety.

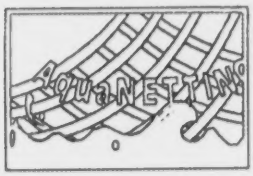
Suggested Vocabulary and Spelling Expander

Gallons	Habitat
Topographical	Beaches
Canyons	Flood Plains
Wetlands	Cliffs



Every plant and animal requires water to live.

IT IS AquaSMART TO CONSERVE AND PRESERVE WATER



First AquaNET: *How Much Water Do I Need?*

Encourage the students to ask their families to participate in this project.

Second AquaNET: Literature Selections

Lathan, Jean Lee, *Rachel Carson, Who Loved the Sea,* Garrard Publishing Company, Champaign, IL., 1973.
Roop, Peter and Connie, *Keep the Lights Burning, Abbie,* Carol Rhoda Books, Minneapolis, MN, 1985 (An Easy to Read Book).
Arnold, Tedd, *No More Water in the Tub,* Dial Books, 1995.
Rauzon, Mark J., & Cynthia Overbeck Bix, *Water, Water Everywhere,* Sierra Club, Books for Children, San Francisco, 1994.
Berger Melvin, *All About Water,* Scholastic, N.Y., 1993.
Wheeler, Jill, *Every Drop Counts: A Book About Water,* Abdo, 1993.
Moore, Jo E., *Landforms and Bodies of Water,* Beginning Geography, Vol. 2, Evan-Moor Corporation, 1993.
Davies, Eryl, *Water Travel,* World on the Move Series, Thomson Learning, 1993.
Dorros, Arthur, *Follow the Water from Brook to Ocean,* Harper Childrens Books, 1993.
Film: *Water: A Timeless Compound.*

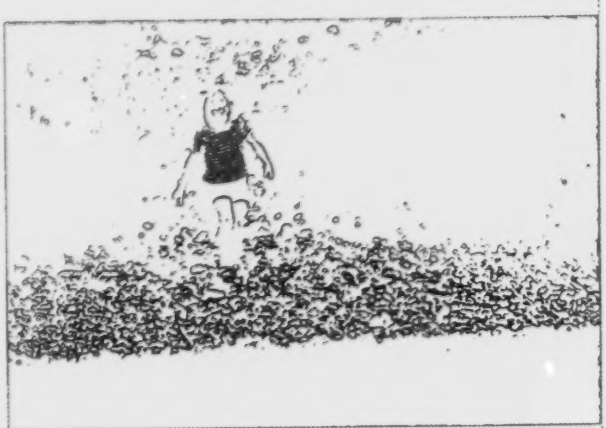
AquaCOPY

Name:_____ Date: _____

A BAD DREAM

Kristin joined the **AquaSMART** Team at school. She had been taking swimming lessons and her teacher thought that Kristin was ready to participate in water sports with other students her age. Tomorrow was the first day that she would meet her teammates, and begin to practice for the swim meets that were planned for the Spring. Kristin was very excited, and had a hard time falling asleep.

After awhile, Kristin fell asleep. Even though she was asleep, she could not stop thinking about the next day. Soon, she began to dream, and in her dream all the water in Texas disappeared. In her dream, Kristin was very sad, because there was no water for swimming, no **AquaSMART** Team, and no Spring swim meets.



Luckily, Kristin was only dreaming. The next morning, there was water for brushing her teeth, her father's coffee, and the dog's water bowl. But what if it hadn't been a dream? What would Texas look like if there was no water in the state?

AquaCOPY

Name:_____ Date: _____

TEXAS WATERWAYS WORKSHEET 1

FIRST AquaCLUE

How Much Water Do I Need?

Start: Date _____ Time _____ to _____ **Finish:** Date _____ Time _____

I Use Water For:	Number of Times a Day	Water Used	Total Gallons

1 Figures from the official Captain Hydro Water Conservation Workbook, p. 22.

INSTRUCTIONS:
Column 1: Enter activities that use water.
Column 2: Enter the number of times a day this activity is done.
Column 3: Enter amount used (see chart).
Column 4: Multiply column 2 x column 3 to obtain total gallons.

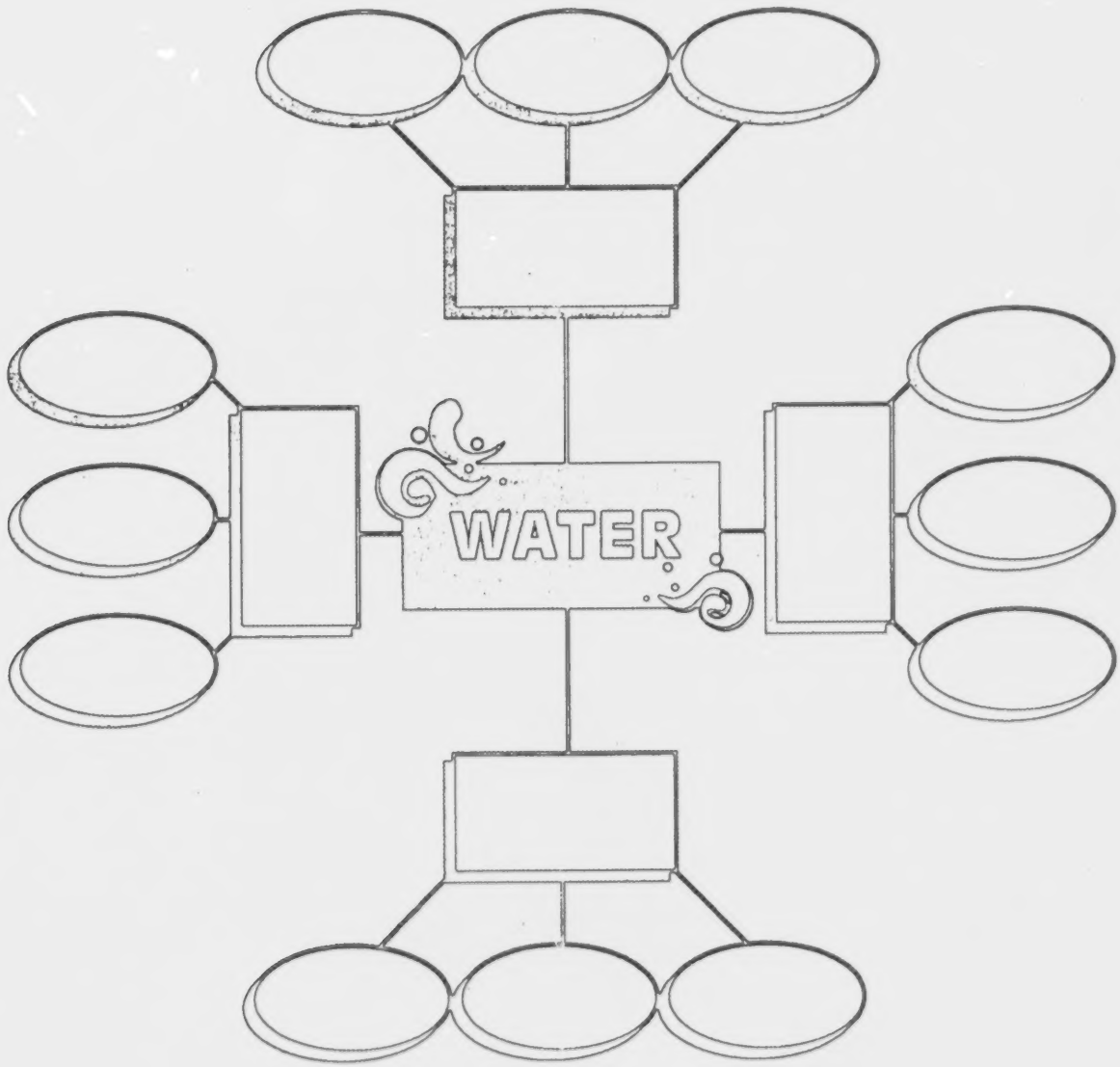
AquaCOPY

Name:_____ Date: _____

TEXAS WATERWAYS WORKSHEET 2

SECOND AquaCLUE

What Does Texas Look Like?



INSTRUCTIONS:
In squares: Enter types of water such as lake, pond, river.
In circles: Enter the kind of wildlife that lives in or near the water.

AquaCOPY

Name:_____ Date: _____

TEXAS WATERWAYS WORKSHEET 3

THIRD AquaCLUE

Who Came To Texas?

Who Came to Texas?	Where Did They Come From?	How Did They Get Here?	What Role Did Water Play?
Sea Explorers			
Fur traders			
Railroad workers			
Farm workers			
Ranchers			
Others			

INSTRUCTIONS:
See chart in Third AquaCLUE.

AquaCOPY

Name:_____ Date: _____

TEXAS WATERWAYS WORKSHEET 4

FOURTH AquaCLUE

Boating Accidents—Make A Graph[1]

Type of Accident	Percent of Accidents
Collision with other Vessels	37.5%
Collision with an Object	15.7
Other types of Accidents	12.5
Flooding/Sinking	8.7
Falls Overboard	7.9
Capsizing	7.2
Grounding	5.7
Fires/Explosions	4.8
Total	**100.0%**

Answer the following questions:

1. Build a graph.

2. What are the most common type of accidents?_____

3. What percent of boating accidents are caused by capsizing? _____

4. What percent of boating accidents are caused by falling overboard?_____

5. What is the least common type of accidents? _____

6. What do you think may be a major cause of accidents?_____

1 Data from U.S. Department of Transportation, U.S. Coast Guard, *Boating Statistics 1993, Teach Safe Boating by Example*, Washington D.C., 1994, p. 13.

INSTRUCTIONS:
See Fourth AquaCLUE for making graph instructions.

AquaLESSON 1

LEARN TO SWIM

☐ **Objective.** Students who learn to swim are **AquaSMART**.

This **AquaLESSON**:

- teaches that swimming is a learned skill,
- teaches the importance of learning to swim,
- teaches that there are do's and don'ts, even for good swimmers,
- provides information about where students can obtain swimming lessons, and
- informs students' families of swimming and other safe water-related activities.

☐ **Summary.** The primary lesson is to learn to swim. The lesson focuses on how students learn to do things; that swimming is a learned activity; and that, similar to other activities, there are rules that govern safe swimming. Also, the lesson introduces resources that teach swimming, and encourages teachers to send that information home to parents. Students and teachers are encouraged to share these resources with the parents.

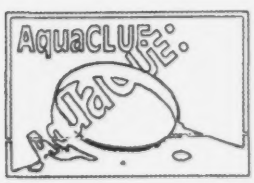
This lesson includes information that helps the teacher expand the lesson. Safety rules governing other bodies of water are given. The teacher can discuss them all or cover the body of water prevalent in the geographic area; the one the students are most likely to visit. The students can discuss different places to swim and safety ideas for each one.

☐ **Storyline.** Water-related activities can be fun, but they can be dangerous, also. The story introduces 3 dangerous situations: disobeying an adult, running and horseplay around the swimming pool, and jumping into the deep end without looking or thinking.

THE BIG MISTAKE

*The **AquaSMART** Team is playing around the swimming pool at Kristin's house. Kristin's mother is sitting at the poolside, reading and watching the Team. When the Team becomes tired of playing in the water, the Team members climb out of the pool to sit in the sun. Kristin's mother goes into the house to get some treats for the Team. Before going into the house, Kristin's mother asks the Team to stay out of the water until she returns.*

*While Kristin's mother is in the house, the Team members begin to chase each other around the pool, running toward the deep end of the pool. In their excitement, Shavannah and Justin jump into the deep water. They did not notice the 10 ft. sign marking the pool depth. Because she cannot swim very well yet, Shavannah begins to panic when she realizes her feet do not reach the bottom. What rules should the **AquaSMART** Team have learned before this happened?*



☐ The **AquaCLUEs** help the students discover important water safety information and rules. The first is that everyone can and should learn to swim, and that swimming is a learned skill. Also, the **AquaCLUEs** help them identify places where they can learn to swim, safety rules for swimming at a pool, and important do's and don'ts for swimming in different bodies of water. The **AquaCLUEs**, once learned, help the students become **AquaSMART.**

First AquaCLUE: *How Did I Learn?*

☐ **Materials:** Worksheet 1.

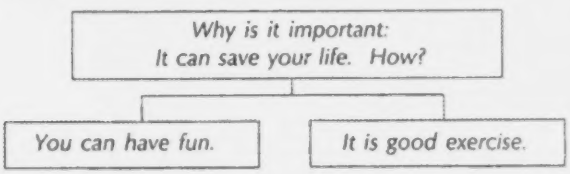
☐ **Time:** 45 minutes

Explain to the students that growing up means learning new skills and new rules for using those skills.

Ask the students to choose a partner, and tell the students they are going to interview each other about skills they learned. Give the students a few minutes to decide which one is the reporter, and which one is the respondent. Instruct the reporter to ask the questions and write the answers on the appropriate line. Then, pass out Worksheet 1.

When the students have completed the interviews, ask the reporter for each group to present the group's findings. Chart the responses on the board.

If none of the students reported on learning to swim, ask the students how many know how to swim. Note the numbers, and chart, graph, or calculate the percent who know how to swim. Discuss the importance of learning to swim.



Return to the story. Ask the children what Shavannah should have learned from that risky adventure.

Second AquaCLUE: *Where Can I Learn To Swim?*

☐ **Materials:** Worksheet 2, yellow pages of a telephone directory.

☐ **Time:** 20 minutes

Ask the students if they know where someone can go to learn to swim. Pass out Worksheet 2, the "Learn to Swim Directory", and for older students, the yellow pages of a telephone directory. Ask them to write in the names of places where someone can go to learn to swim, the addresses, and the telephone numbers. Help them use the yellow pages to find the telephone numbers and addresses.

Suggested places can include:

School swimming programs,
American Red Cross,
YMCA, YWCA,
Swim clubs,
Health clubs, and
Scouts and youth organizations.

Explain that the places mentioned are "accredited", that is, a swimming expert teaches the classes. Ask the student to discuss why it is important to have an accredited swimming instructor teach swimming.

Next, have the students think of other sports where an accredited teacher is necessary. They can include sports such as tennis, football, golf, and basketball.

Then, ask the student why it might be more important to learn swimming than some of these other sports from an accredited instructor. The students should discover that swimming can be more dangerous than the other sports, so it is most important that they learn the correct way to swim.

Third AquaCLUE: *Swimming Pool Safety Rules*

☐ **Materials:** Tape measure, at least 8 feet long.

☐ **Time:** 15 minutes for tape measure, 20 minutes for discussion

Ask the students if they know any safety rules for swimming. Start with the rule that children should always know how deep the water is before they jump in. Ask them if they know how deep is 8 ft.? Using the tape measure, have one student stand against the blackboard, and another mark their height on the board. Then, using the tape measure, draw a line at 8 ft. Then, let the students see how much water would be over their head if they jumped into 8 ft. of water.

Remind the students that even good swimmers follow swimming pool safety rules. Ask the students if they can think of any additional safety rules. They can include the following:

- Swim where there is a lifeguard on duty.
- If there is no lifeguard, be sure a responsible adult is with you.
- Obey the lifeguard or the responsible adult at all times.
- Observe the water depth.
- Stay in the shallow end unless you can swim.
- Don't run or horseplay around the pool.
- Do not jump or dive into shallow water.

☐ **Return to the story.** Ask the students to discuss which of the rules the **AquaSMART** Team forgot. Ask the students to discuss the rules Kristin, in particular, should have learned. The forgotten rules should include:

- Obey the responsible adult at all times. Remember, Kristin's mother told them to stay out of the pool until she returned.
- Don't run or horseplay around the pool.
- Observe the water depth.
- Stay in the shallow end unless you can swim.

Fourth AquaCLUE: *Swimming Do's and Don'ts*

☐ **Materials:** Worksheet 3.

☐ **Time:** 25 minutes for worksheet, 25 minutes for discussion

This **AquaCLUE** can be specific to the geographic area or a general discussion of all types of water found in Texas.

Ask the students if there are places other than swimming pools where they might go to swim. They can include lakes, reservoirs, rivers, ponds, and the ocean. *Never swim in aqueducts or canals.*

After identifying each type of water, if time permits, discuss the safety factors for each. If there is not enough time to discuss each, discuss the body of water the students are most likely to visit.

☐ ***Important Do's and Don'ts***

Reinforce the idea that following the rules ensures a safe and happy day of swimming and boating. Remind the students that even good swimmers follow the do's and don'ts.

Lakes or Reservoirs:

Discuss the difference between a lake and a reservoir.

- Draw the students' attention to the changing level of the water in a reservoir. Remind them that the lowered level of water may bring the water's edge closer to a drop off point that could put someone in water over their head.
- Swim in a designated area. Explain that reservoirs often have steep sides with slippery footing, making it easy to loose your footing.
- Swim away from boating areas.
- Observe boats and watercraft of all kinds. If a boat is approaching a swimming area, wave your arms to attract attention so that the boat does not enter the area.
- Watch for the rope pulling a water skier.
- When you are near the water, be sure there is a responsible adult with you.
- Do not jump or dive into a lake or reservoir.

Rivers:

- Swim in an area set aside for swimming.
- Be aware of slippery or rocky banks.
- Go to the river with a responsible adult.
- Do not swim where there is a strong current.
- If you fall into a river, float on your back with your feet going first downstream. Use your hands to steer yourself toward the side eddies, and keep away from logs or low lying branches.

Canals:

- Ask the children to discuss canals. Be sure they know what they are.
- Never swim in a canal.

Ponds:

- Do not swim in a pond without permission.
- Do not swim in a pond unless a responsible adult is present.

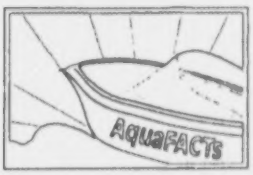
Oceans:

- Swim at a beach that has a lifeguard.
- Swim with a buddy.
- Do not swim if there is an undertow.
- Beware of big waves.
- Do not get caught out on the rocks when the tide comes in.
- Watch for sea animals. Be able to identify which of the sea animals can irritate your skin, such as jelly fish.
- Use sun screen.
- Learn to read a tide book before you go to the beach.

Pass out Worksheet 3. Ask the students to fill in the squares. The answers can be do's or don'ts or characteristics of the waterway. For instance, in rivers, do avoid rocks. For younger students, draw the worksheet on the blackboard and fill in the words with them. Have the students use the word bank to help them fill in the boxes.

Suggested Vocabulary and Spelling Expander

Skills	Tide	Canal
Accredited	Current	
Reservoir	Eddy	

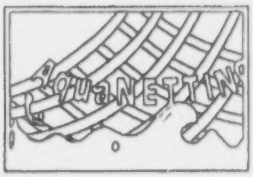


Water-related accidents are the 2nd leading cause of accidental deaths for kids between the ages of 4 and 19.

Everyone can learn to swim, it is a skill.

Learning to swim can save your life.

BE AquaSMART—LEARN TO SWIM



First AquaNET: *Send Worksheet 2 Home to Families*

Place telephone numbers for information (e.g., American Red Cross, YWCA and YMCA's, and Recreation Community Centers) about swimming classes on the classroom message board.

Second AquaNET: *"Learn to Swim Directory"*

Remind students to take their "Learn to Swim Directory" home to their family.

Third AquaNET: *Children's Literature Selections*

Burmingham, John, *Come Away from the Water Shirley,* Thomas Crowell, N.Y., 1977.
Kessler, Leonard, *Last One In Is a Rotten Egg,* Harper Row, N.Y., 1969, (I CAN READ BOOK).
Taylor, Barbara, *Sink or Swim,* The Science of Water, Random Books, 1991.
Rinkoff, Barbara, *No Pushing, No Ducking,* Lothrop Safety Series, 1974.
Napoli, Donna, *When the Water Closes Over My Head,* Dutton Children Books, 1994.

AquaCOPY

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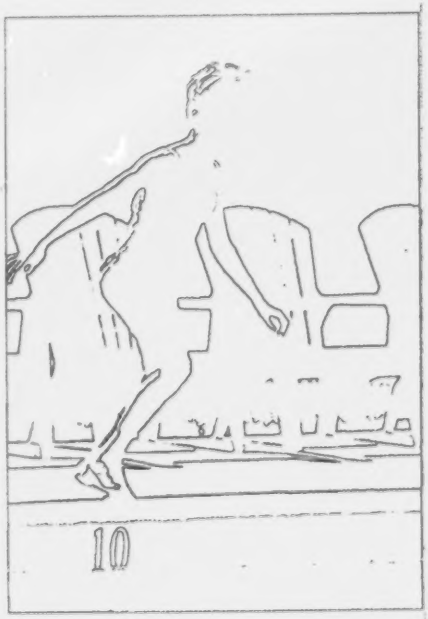
The **AquaSMART** Team is playing around the swimming pool at Kristin's house. Kristin's mother is sitting at the poolside, reading and watching the Team. When the Team becomes tired of playing in the water, the Team members climb out of the pool to sit in the sun. Kristin's mother goes into the house to get some treats for the Team. Before going into the house, Kristin's mother asks the Team to stay out of the water until she returns.

While Kristin's mother is in the house, the Team members begin to chase each other around the pool, running toward the deep end of the pool. In their excitement, Shavannah and Justin jump into the deep water. They did not notice the 10 ft. sign marking the pool depth. Because she cannot swim very well yet, Shavannah begins to panic when she realizes her feet do not reach the bottom. What rules should the **AquaSMART** Team have learned before this happened?



AquaCOPY

Name: _____ Date: _____

LESSON 1, WORKSHEET 1

FIRST AquaCLUE

HOW DID I LEARN

The reporter asks the questions and jots down the responses on the worksheet.

Name of person being interviewed: _____

Name of person reporting: _____

1. Tell me about something you know how to do really well–something that you are an expert at doing.

2. When did you learn to do it? _____

3. Who helped you learn? _____

4. Was it hard or easy for you to learn? _____

5. How did you feel when you learned to do it? _____

6. Have you taught anyone to do this? _____

AquaCOPY

Name:_____ Date: _____

LESSON 1, WORKSHEET 2

SECOND AquaCLUE

LEARN TO SWIM DIRECTORY

PLACES TO LEARN TO SWIM

Name: _____

Where: _____

Phone Number: _____

Name: _____

Where: _____

Phone Number: _____

Name: _____

Where: _____

Phone Number: _____

Name: _____

Where: _____

Phone Number: _____

Name: _____

Where: _____

Phone Number: _____

INSTRUCTIONS:
Using the yellow pages of a telephone book, have the students write in the names, locations, and phone numbers of places where they can learn to swim.

AquaCOPY

Name:_____ Date: _____

LESSON 1, WORKSHEET 3

FOURTH AquaCLUE

WATER WORD PUZZLE

For each category in the left column, find a word beginning with each letter of W-A-T-E-R and write it in the correct blank. Try not to use a word more than once. Some blanks are already done for you. Find words in the word bank for the other squares.

	W	A	T	E	R
Rivers		Avoid Rocks			
Oceans			Tide		
Pools					
Lakes					Rowing
Bayou	Warning!				

WORD BANK

Rafting
Wild Currents
Eddy
Warning
Walk
Anemones
Waves
Toys
Act Safely
Tides
Exercise Care
Avoid!
Take A Pal
Edge
Rubber Ducky
Risk
Trespassing
Enter Carefully
Risk!
Riptides

AquaLESSON 2

WEAR A LIFE JACKET

☐ **Objective.** Wearing a Life Jacket is **AquaSMART**.

This **AquaLESSON**:

- stresses the importance of wearing a life jacket,
- teaches that life jackets should be the right type, size, and fit,
- increases awareness of Coast Guard-approved water equipment,
- introduces the Texas Water Safety Act, and
- teaches that, similar to seat belts, wearing a life jacket is required by law for children under 7 years of age.

☐ **Summary.** Experts agree that wearing a properly fitted, Coast Guard-approved life jacket is the most important safety practice for boaters, rafters, and participants in other water sports. This unit emphasizes that it is important to wear a life jacket when playing near the water, and that the life jacket should fit correctly.

☐ **Storyline.** The **AquaSMART** Team decides to go rafting on the river. They know how to swim, but did not take time to learn the rules that make rafting a safe sport.

TAKING A RISK

*The **AquaSMART** Team, Shavannah, Justin, Andre, and Kristin have been taking swimming lessons and practicing what they learned almost every day. By mid-summer, all the Team members were good swimmers.*

*One day the **AquaSMART** Team decided to go rafting on the river. The **AquaSMART** Team had never been rafting before, but it looked like fun and, because the Team knew they could swim, they did not think it would be dangerous. They brought along their lunch and towels, but they did not bring along their life jackets. They did not think the raft was a boat.*

The river was swift, but smooth, and the Team was having fun. Soon, they reached a part of the river where it was very rocky. The water began to move faster, and the Team could not avoid the rocks. Their lunch and towels were washed overboard. All of a sudden, the raft got caught in an eddy, and Justin fell off the raft. How could the Team have avoided this situation?*

*** An eddy is a current of water moving in the opposite direction of the main stream or movement of a river or ocean.**

☐ The **AquaCLUEs** help students learn the importance of wearing the proper equipment. In this case, the Team should have been wearing life jackets. The clues introduce the rules that the life jacket must be Coast Guard-approved, that they must fit correctly, and that the conditions for wearing the life jacket are in the law. Finally, the students learn that there are skills they can learn that will help save them if the situation becomes dangerous.

The **AquaCLUEs** reinforce the previous lesson. It reiterates that everyone should learn how to swim, and that the **AquaSMART** Team should have gone rafting with a responsible adult.

First AquaCLUE: *Wear the Right AquaGEAR*

☐ **Materials:** Worksheet 1.

☐ **Time:** 30 minutes

For children under the age of 13, wearing a life jacket while the boat is underway is the law. Explain to the students that athletes and some workers must wear special clothing and equipment to protect themselves from being hurt.

Place the following grid on the blackboard, and ask the students to describe the special clothing and equipment required for each occupation or sport.

Job/sport	*Clothing or Equipment*	*Reason it is Worn*
Fireman		
Policeman		
Football Player		
Rollerblade Skater		
Race Car Driver		
Scuba Diver		

On the last line, write in Boater/Rafter. Ask the students if boaters or rafters wear special protective clothing. If they do not mention a life jacket, be sure to mention it, as well as the reason for wearing it.

Use the discussion to talk about flotation. Explain that a life jacket helps the wearer to remain afloat. Emphasize that the proper flotation devices are Coast Guard-approved. When swimming in deep water, a river or an ocean, pool toys are not suitable flotation devices. While they can be used for fun, they cannot be relied upon to save your life.

Emphasize that the life jacket must fit correctly. If it does not fit correctly, the wearer may slip out of it, and the life jacket will float away. The life jacket must be in good condition. Life jackets that are moldy or torn should be thrown away and replaced.

Tell the students that a life jacket must be worn by children under the age of 13 while a boat is underway. Emphasize that for everyone over the age of 13, wearing a life jacket, even if not required by law, makes good sense.

Explain that the **AquaSMART** Team should have worn life jackets even though they had become good swimmers. The reason is that there are some circumstances where even good swimmers cannot swim.

Discuss the events that could have happened to the **AquaSMART** Team :

- The current may have been so strong, the Team may have had difficulty swimming.
- The Team could not handle the boat.
- The Team may have had a difficult time reaching the shore.
- One Team member could have been seriously injured or drowned.

Ask the students how the story could have had a happy ending. Be sure they include the following:

- Learn to swim.
- Learn to float in the river, downstream, and feet first. Use your arms and legs to push yourself away from obstructions.
- Be prepared. When you go to the river, play on a boating dock, or enter unknown water, wear a life jacket that fits.
- Even with a life jacket, do not raft into the fast current unless you are accompanied by an adult.
- Pass out worksheet 1. Have the students draw the correct equipment on the players.

Second AquaCLUE: *Learning to Wear a Life Jacket*

☐ **Materials:** Two children's and one adult life jacket. Life jackets may be borrowed from a boating store or the visiting expert can be asked to supply them.

☐ **Time:** 30-45 minutes

This **AquaCLUE** is a group activity. It teaches the students to wear a life jacket. The **AquaCLUE** consists of a "hands-on" experience. It is recommended that a member of the Coast Guard Auxiliary, Coast Guard, local Aquatic Center, Power Squadrons, YWCA or YMCA staff or other Coast Guard-accredited organization be asked to come to the classroom to demonstrate the proper use of this equipment.

If the services of an expert cannot be made available, the teacher can complete the activity as follows:

☐ **Select student volunteers.** First, explain that the wearers should check the life jacket before they put it on. Look for tears, cuts or holes in the fabric. Check to see if it is marked adult or child. Check to see if it is marked "Coast Guard Approved". Check to see if it has a light reflector, a whistle, and that the buckles work properly. If the life jacket does not fit, is torn, moldy, or the buckles do not work properly, ask the students what they would do. The answer is, "THROW THE JACKET AWAY AND PURCHASE A NEW ONE."

Using a student volunteer, demonstrate how to put on the life jacket correctly. Let the students practice putting on the life jackets. Point out that a well-equipped life jacket has reflection tape and a whistle attached to the front, and the name of the owner written inside the vest. Explain to the students that reflection tape can be seen at night, the whistle can be used to attract attention if a swimmer or boater needs help, and your name inside the life jacket ensures that you wear the right jacket each time you go boating.

Then, put the adult life jacket on one of the students. Explain that if your arms are raised over your head while in the water, a life jacket that is too big can slip off. Pull up firmly from the shoulders of the vest, showing how the life jacket may slip off if it does not fit right. Reiterate that if a life jacket does not fit, it may endanger the life of the wearer.

The best life jacket is:

- one that fits,
- one that is in good condition,
- one that is marked "U.S. Coast Guard Approved",
- one that holds your head above water, and
- one that has light reflection tape and a whistle.

Third AquaCLUE: *Complete the Word Map*

☐ **Materials:** Worksheet 2.

☐ **Time:** 30 minutes

Pass out Worksheet 2, the Life Jacket Word Map. This exercise will reinforce the rules the students have already learned.

Ask the students to fill in the blank boxes. Younger students can draw pictures, older students can write in the words.

The completed word map should include the following:

- Who wears it? The students can enter their name, or draw a picture of themselves.
- How to tell if it is a good one? The students can write in, "buckles work properly", "not torn", "fits well", "not moldy", or draw a picture of a life jacket in good condition.
- How to know if it fits? The students can write in, "it won't slip off, or go over my head", or they can draw a picture showing a student with a jacket that fits.
- When/Where to use it? If you are under 13 years old, and in a boat that is underway, the law states that you must wear a life jacket. It makes good sense for everyone, when near an unknown or dangerous body of water, to always wear a life jacket.
- Why use it? For safety and for fun.
- What not to use in place of a life jacket? Pool toys, ski belt, water wings.

Fourth AquaCLUE: *Circle the Safe Flotation Devices*

☐ **Materials:** Worksheet 3.

☐ **Time:** 15 minutes

This AquaCLUE teaches the students that there are many kinds of flotation devices. The clue emphasizes that only some of these flotation devices can be depended on to save their life.

On the blackboard, list the following types of Coast Guard-approved flotation devices. Explain that there are two kinds of flotation devices. They include:

Flotation Devices that can be worn.

- Life vest
- Life jacket

Flotation Devices that can be thrown to someone who has fallen overboard.

- Buoyant cushion
- Ring

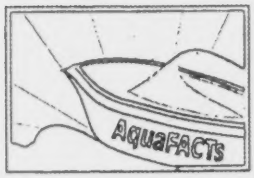
Distribute Worksheet 3 or use this worksheet as an overhead for group activities. Ask the students to circle the flotation device that could save their lives. Have the students put an "X" next to the devices that should be worn. Have the students discuss how to use the flotation devices that can be thrown to someone who has fallen overboard. The discussion should include:

- **A Buoyant Cushion.** Place on your chest with your arms through the straps.
- **A Ring.** Place over your head with your arms over the top of the ring.

The flotation devices listed on the blackboard should be circled.

Suggested Vocabulary and Spelling Expander

Boating Law	PFD (Personal Flotation Device)
Approved	Harbors and Navigation Code
Eddy	Athletes
Life Jacket	Buoyant Cushion



The law says, that if you are under 13 years of age, you must wear a life jacket while in a boat.

The best athletes wear proper protective clothing that fits.

The best equipment cannot save you if it does not fit correctly.

It is good practice to wear your life jacket when you are playing on a dock or near unknown or dangerous water, such as riverbanks.

BE AquaSMART, WEAR A LIFE JACKET

First AquaNET: *Send Worksheet 4, Texas Boating Law, Home to the Family*

☐ **Materials:** Worksheet 4.

This clue encourages students to wear a life jacket while in a boat, playing on a boat dock or entering water that may be dangerous. In this lesson, wearing a life jacket should become a habit. The law, however, is complex. Teachers are encouraged to duplicate Worksheet 4, Water Safety Act, (Chapter 31. Parks and Wildlife Code. Section 31-066) governing personal flotation devices for children, and send it home to the parents. The message to the parents should state that it is a good idea for students to wear a life jacket when playing near unknown, dangerous or unguarded water.

Ask the students to have their parents read and sign the family homework worksheet. Ask the students to return the worksheets so that they can be included in the work shown during family night at school.

Second AquaNET: *Ask the U.S. Coast Guard Auxiliary to Visit the Classroom*

Ask the U.S. Coast Guard Auxiliary to come to a PTA meeting to demonstrate the correct flotation devices, and explain their proper use. To reach the U.S. Coast Guard Auxiliary, call 1-800-366-BOAT. Invite all parents to attend.

Third AquaNET: *Send Worksheet 3 Home to the Family*

Send home the completed Worksheet 3, so that the family sees a picture of the U.S. Coast Guard-approved flotation devices.

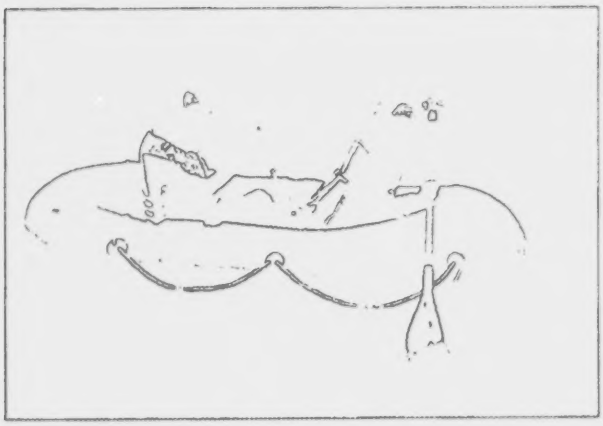
Fourth AquaNET: *Children's Literature Selections*

Jenness, Aylette, *Along the Niger River, An African Way of Life*, N.Y., 1974.
Hoyt, Edwin P., *American Steamboat Stories*, Abelard-Schuman, N.Y., 1966.
Yeoman, John and Quentin Blake, *The Bear's Water Picnic*, The Macmillan Company, 1970. (An Easy to Read Book).
Stephen, Richard, *Our Planet: Rivers*, Troll Associates, 1990.
Bandes, Hanna and Jeanette Winter, *Sleepy River*, Philomel Books, N.Y., 1993.
Paulsen, Gary, *The River* (sequel to *Hatchet*), Dell Yearling, 1991.
Holling, Holling C., *Paddle to the Sea*, Houghton Mifflin, 1941.

AquaCOPY

Name:_____ Date: _____

TAKING A RISK



The **AquaSMART** Team, Shavannah, Justin, Andre, and Kristin have been taking swimming lessons and practicing what they learned almost every day. By mid-summer, all the Team members were good swimmers.

One day the **AquaSMART** Team decided to go rafting on the river. The **AquaSMART** Team had never been rafting before, but it looked like fun and, because the Team knew they could swim, they did not think it would be dangerous . They brought along their lunch and towels, but they did not bring along their life jackets. They did not think the raft was a boat.

The river was swift, but smooth, and the Team was having fun. Soon, they reached a part of the river where it was very rocky. The water began to move faster, and the Team could not avoid the rocks. Their lunch and towels were washed overboard. All of a sudden, the raft got caught in an eddy*, and Justin fell off the raft. How could the Team have avoided this situation?

* An eddy is a current of water moving in the opposite direction of the main stream or movement of a river or ocean.

AquaCOPY

Name:_____ Date: _____

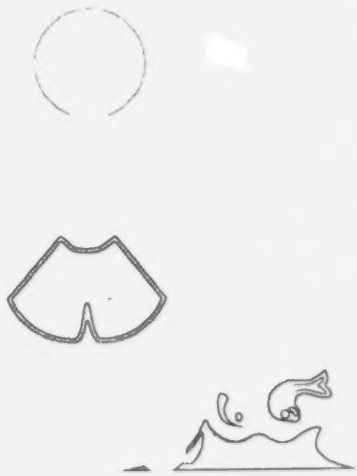
LESSON 2, WORKSHEET 1

FIRST AquaCLUE

DRAW THE EQUIPMENT

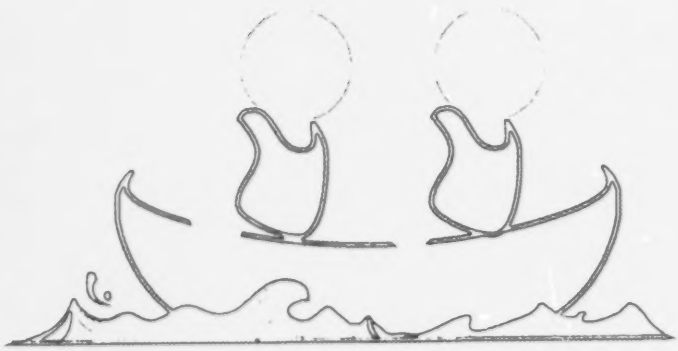
FIREMAN

SCUBA DIVER



ROLLER BLADES

CANOE RIDERS



INSTRUCTIONS:
Have the students draw the correct equipment on the figures.

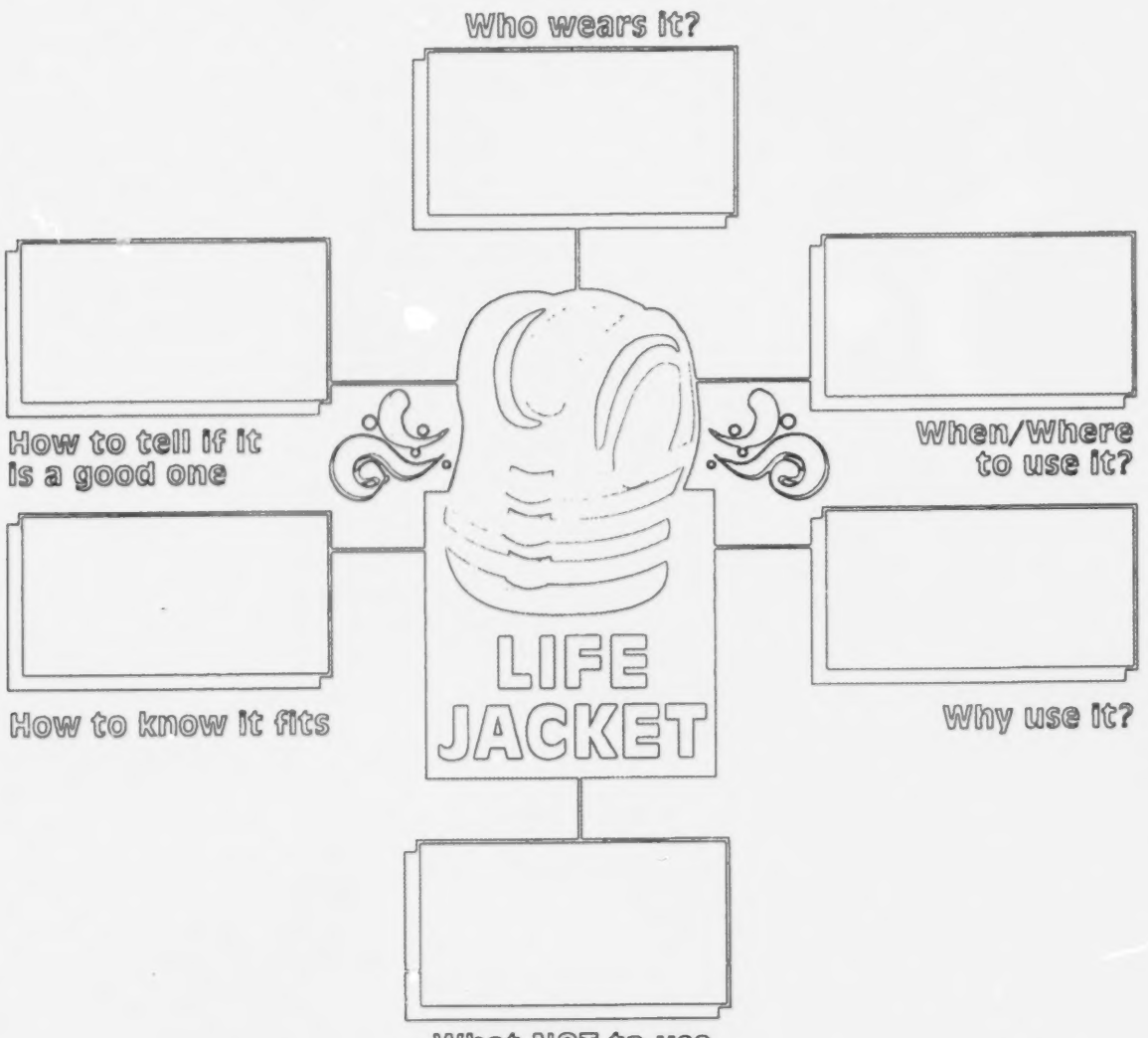
AquaCOPY

Name:_____ Date: _____

LESSON 2, WORKSHEET 2 LIFE JACKET MAP

THIRD AquaCLUE

SEE HOW MUCH YOU REMEMBER ABOUT LIFE JACKETS BY FILLING IN EACH OF THE BLANK BOXES


Who wears it?
How to tell if it is a good one
When/Where to use it?
LIFE JACKET
How to know it fits
Why use it?
What NOT to use in place of a life jacket

INSTRUCTIONS:
Current answers are in Third AquaCLUE.

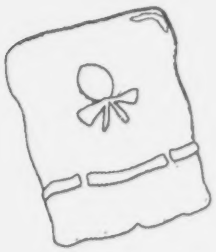
AquaCOPY

Name: _____ Date: _____

LESSON 2, WORKSHEET 3 FLOTATION DEVICES

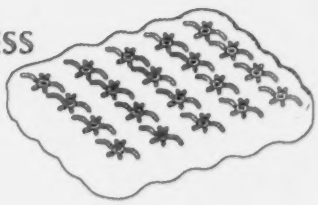
FOURTH AquaCLUE

CIRCLE THE COAST GUARD-APPROVED FLOTATION DEVICES



LIFE VEST

AIR MATTRESS

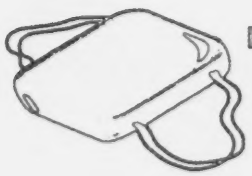


BEACH BALL

HORSESHOE BUOY

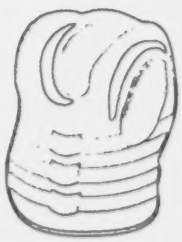
TOY HORSE

WATER WINGS



BUOYANT CUSHION

LIFE JACKET



RING

RUBBER DUCKY

39

INSTRUCTIONS:
Circle the flotation devices that will keep you afloat and are approved by the U.S. Coast Guard.

AquaCOPY

Name:_____ Date: _____

LESSON 2, WORKSHEET 4 TEXAS BOATING LAW

FIRST AquaNET

PERSONAL FLOTATION DEVICE (life jackets) REQUIRED FOR CHILDREN

(a) A motorboat must have at least one life preserver, life belt, ring buoy, or other device of the sort prescribed by the regulations of the commandant of the Coast Guard for each person on board, so placed as to be readily accessible.

(b) A motorboat carrying passengers for hire must have a readily accessible life preserver of the sort prescribed by the regulations of the commandant of the Coast Guard for each person on board.

(c) The operator of a class A or class 1 motorboat, while underway, shall require every passenger under 13 years of age to wear a life preserver of the sort prescribed by the regulations of the commandant of the Coast Guard. A life belt or ring buoy does not satisfy this requirement.

Parents: it is a good idea for all children to wear a properly fitted, U.S. Coast Guard-approved life jacket whenever they are in a boat, near unknown or dangerous water, or swimming in water **WHERE THERE IS NO LIFEGUARD.**

Family Member Signature:_____

AquaLESSON 3

LEARN TO FLOAT

☐ **Objective.** Learning to float is **AquaSMART**.

This **AquaLESSON**:

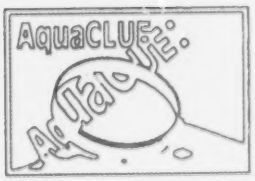
- reinforces the Learn to Swim and Wear a Life Jacket AquaLESSONs,
- introduces skills such as remaining calm, learning to float, and treading water,
- teaches that prevention is the most important safety rule, and
- reinforces safety lessons that apply to everyday situations.

☐ **Summary.** The focus of this **AquaLESSON** is that it is possible to rescue yourself. The skills involved in rescuing yourself include keeping your head above water, remaining calm, observing the situation, and learning to float and tread water. The lesson encourages the students to obtain the proper training for floating and treading water from accredited professionals.

☐ **Storyline.** Kristin is playing on the boat dock, and not following the safety rules.

A SLIP OF THE FOOT

Kristin and her parents are on the boat dock. Kristin's father is working on their boat, and her mother is helping him. Kristin is playing on the dock. She did not intend to go into the water, so she wasn't wearing her life jacket. The dock was slippery and, as Kristin was playing along the edges, she slipped and fell into the water. The water is too deep, and Kristin cannot stand. She cannot reach the stairs or find anything to help her climb back up on the dock. What should she do?



The **AquaCLUEs** introduce additional boating safety rules. Along with learning to swim, and wearing a life jacket, the students are advised that it is important to learn to float and to tread water. In Kristin's case, the students will be very likely to respond that Kristin was close enough to the dock to swim to it, or to yell for help. The teacher should introduce the fact that there might be circumstances that prevent Kristin from swimming back or yelling for help. Kristin:

- may have been hurt.
- may think she cannot swim that far.
- may be able to swim to the dock but not able to climb back up.
- may have fallen where no one could see her.
- may have panicked.

Then, what would she do?

First AquaCLUE: *How Do I Rescue Myself?*

☐ **Materials:** At least two pieces of poster board or white paper, and marker pens.

☐ **Time:** 50 minutes for group project

This **AquaCLUE** is a brainstorming activity for the students. It helps them work from potentially dangerous situations or incidents to safety rules and skills.

Write each of the **AquaCLUEs** on a piece of large paper, and place the paper on the wall. Divide the class into four groups. For younger students, this exercise may be conducted as a class project. If the class is divided into groups, assign each group to one of the charts, and ask one student to be the recorder, and one to be the reporter.

The first chart has **AquaCLUEs** and rules about prevention. Explain that preventing accidents is the most important safety strategy. The second chart has **AquaCLUEs** and rules about preparation. Preparation is important because, when an accident does happen, everyone should know what to do.

Begin by giving the students the **AquaCLUEs**. For each Prevention **AquaCLUE**, have the student find an **AquaRULE**. Examples are given below. Similarly, for Preparation, have the students read the **AquaCLUEs**, and find appropriate **AquaSKILLs**.

PREVENTION

AquaCLUEs

- Should you swim alone?
- What if you accidentally fall into the water?
- Does someone know where you are going?
- Did you look for signs?

AquaRULEs

(Possible Student Responses)

- Don't run on the dock, or near the pool, or around dangerous water.
- Don't push other students into the water.
- Wear your life jacket.
- Be sure a responsible adult is close by.
- Practice the buddy system.
- Tell a responsible adult where you are going.
- Make sure the water is safe, obey signs.

PREPARATION

AquaCLUEs

- Which skills other than swimming can help you?
- How can you keep your head above the water?
- What can keep you afloat?
- Is someone nearby?
- Is there a safe place close by? Can you move toward it?

AquaSKILLs

(Possible Student Responses)

- Float, tread water, swim.
- Think about how to rescue yourself.
- Don't thrash about, move arms and legs in slow circles.
- Be an observer.
- Remain calm, think.

☐ **Return to the story.** Ask the students how Kristin could have avoided the unfortunate event? Be sure the students concentrate on the safety first elements: don't play on the dock, and wear your Coast Guard-approved life vest.

Second AquaCLUE: *Practice Makes Perfect*

☐ **Time:** 45 minute group activity

This activity can be used as a "brain teaser" activity. Students can practice the motions for floating and treading water.

Ask someone from the closest Aquatic Center, Coast Guard Auxiliary, or other accredited organization for water sports to participate in this **AquaCLUE**. This could include a field trip to the location or a visit to the classroom by a person who teaches swimming. The objective is to talk about the correct techniques for rescuing yourself. The results of this **AquaCLUE** should include the following:

☐ **How To Stay Afloat**

Swim. If it's possible, swim to the closest secure object you can hold onto. Be sure the object is big enough to carry your weight. Remind the students that swimming is the most important skill for rescuing yourself.

Tread Water. Treading water is a way of staying afloat by moving your arms and legs in wide circles. Usually, when there is no current, you remain in one place while treading water. Remember, this does not mean flapping your arms wildly. Treading water is useful when:

- it is necessary to catch your breath, and assess the situation;
- it is necessary to look around for the nearest safe place, and
- the nearest safe place is too far, and you are not able to swim to it.

Have the students sit on their chairs and move their arms and legs in the appropriate movements.

Float. Learn to float. When you are floating, your lungs are full of air and act as a flotation device. Floating is useful when:

- the closest safe place cannot be seen or is too far away;
- you are tired of swimming or treading water, and you need to rest.

Floating down a river requires a special technique: float feet first, using your arms and legs to push yourself away from rocks, tree trunks and other obstacles in the water. Stay away from overhanging branches.

Demonstrate and ask the students to practice the techniques for floating and treading water.

Ask the accredited swim teachers to demonstrate the techniques for floating and treading water. The demonstration should teach the students that treading water is an easy way to keep your head above water so that you can see things around you, and watch and signal for help. The students can sit on a chair and practice the movements, or stand and practice the movements for arms and legs separately.

As the students practice, ask them to look for objects in the room that can float, and might be big enough to keep them afloat, also.

Then ask the students to look for places, such as a boat or river bank, toward which they can move. In this exercise, the students can pretend the door and windows are the objective.

After demonstrating the strokes and practicing observation skills, the students should be encouraged to practice the strokes at home in front of the mirror or while standing shoulder deep in a swimming pool.

Third AquaCLUE: *Make a Safety Plan*

☐ **Material:** Crayons, marker pens, paper, stapler, tape.

☐ **Time:** 45 minutes

Remind the students that prevention is the safest plan because it helps them avoid or, when unavoidable, minimize the effect of dangerous situations. This **AquaCLUE** teaches the students that Safety Plans can be made for many situations, including water sports.

The project is a class book entitled, "What To Do When". Divide the students into groups to work on the book. First, ask the students to select the topics on dangerous situations that can be included in the book. Write the topics on the blackboard. Ask one group to volunteer to design the book cover, write the Table of Contents, and assemble the book. Ask each group to select one topic. Topics can include

What to do when:

- you are lost;
- your bicycle is stolen;
- your pet is lost;
- you see a house on fire;
- you are in an earthquake; or
- you fall into deep water.

Each topic should include the following subsections:

- **What I need to know.** Include telephone numbers, how and when to use 911, or names of persons who can help, such as fireman.
- **What I need to do.** Make a telephone call, make a poster to find the lost pet, or hide under something during an earthquake.
- **What can I observe.** This can include finding a safe place, the closest police or fire station, or public telephones.
- **What are the safety rules.** Include locks for bicycles, proper care of safety equipment, know how to swim, float, and tread water, observe the buddy system, and tell responsible adults where you are going.

Fourth AquaCLUE: *Write a Happy Ending*

☐ **Material:** Worksheet 1.

☐ **Time:** 20-35 minutes

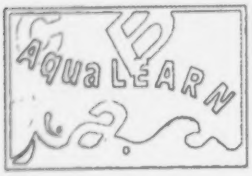
Review the story with the students. Then, pass out Worksheet 3 and ask them to either draw or write a happy ending to the story, or to draw or rewrite the story so that Kristin prevented a dangerous situation.

The happy ending can include:

- Kristin's mother saw her fall into the water, and reached in to save her.
- Kristin remained calm, floated back to the dock, and climbed up the ladder.
- Kristin was a good swimmer and swam back to shore.

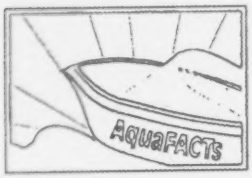
The prevention rewrite can include:

- Kristin did not run on the dock.
- Kristin wore her life jacket.



Suggested Vocabulary and Spelling Expander

Float	Calm
Tread water	Observe
Emergency	Prevention
Preparation	

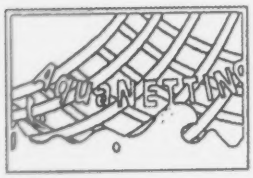


You can rescue yourself. Learn to swim, float, and tread water.

Know and practice safety rules.

Make a plan, so that you know what to do in an emergency.

Preventing accidents is the best plan.



First AquaNET

Display the "What To Do When" book developed in the classroom during open house and back to school nights.

Second AquaNET: Families, Teach Your Children to Rescue Themselves

☐ **Materials:** Worksheet 2.

Reproduce the first AquaCLUE on Worksheet 2 and send it home with the students. Have the student fill in the line Accredited Swimming Instructor with an appropriate number. Then, ask the students to interview a family member. Ask them: (1) How old were you when you learned to swim? (2) Where did you learn to swim? Have the students bring the worksheets back to class. Discuss: (1) Were the family members' learning-to-swim experiences different than theirs? (2) Why is it better to learn to swim with an accredited teacher?

Third AquaNET: *Children's Literature Selections*

Paulson, Gary, *Hatchet*, Puffin, 1988.
Corrick, Carol, *Left Behind* Clarion Books, N.Y., 1988 (An Easy to Read book).
Hines, Anna Grossmichel, *Don't Worry, I'll Find You*, Dutton, N.Y., 1988.
Taylor, Barbara, *Sink or Swim: The Science of Water*, Random Books, 1991.
Evans, David, and Claudete Williams, *Water and Floating*, Darling Kindersley, 1993.

AquaCOPY

Name:_____ Date: _____

A SLIP OF THE FOOT

Kristin and her parents are on the boat dock. Kristin's father is working on their boat, and her mother is helping him. Kristin is playing on the dock. She did not intend to go into the water, so she wasn't wearing her life jacket. The dock was slippery and, as Kristin was playing along the edges, she slipped and fell into the water. The water is too deep, and Kristin cannot stand. She cannot reach the stairs or find anything to help her climb back up on the dock. What should she do?

AquaCOPY

Name:_____ Date: _____

LESSON 3, WORKSHEET 1 RESCUE YOURSELF

FOURTH AquaCLUE

A SLIP OF THE FOOT

Kristin and her parents are on the boat dock. Kristin's father is working on their boat, and her mother is helping him. Kristin is playing on the dock. She did not intend to go into the water, so she wasn't wearing her life jacket. The dock was slippery and, as Kristin was playing along the edges, she slipped and fell into the water. The water is too deep, and Kristin cannot stand. She cannot reach the stairs or find anything to help her climb back up on the dock. What should she do?

Write a happy ending.

Rewrite the story so that Kristin prevents a dangerous situation.

AquaCOPY

Name:_____ Date: _____

LESSON 3, WORKSHEET 2

SECOND AquaNET

FAMILIES, TEACH YOUR CHILDREN TO RESCUE THEMSELVES

Families: Your children are learning boating and water safety rules in school. They are learning rules for preventing accidents, and rules for being prepared in case an accident occurs. Please go over these rules with your children. Then help your children answer the questions and encourage them to bring the worksheet back to school so they can share with the other students.

PREVENTION

AquaRULEs

Don't run on the dock, or near the pool, or around dangerous water.
Don't push other students into the water.
Wear your life jacket.
Be sure a responsible adult is close by, practice the buddy system, or tell someone where you are going.
Look for signs and obey them.

PREPARATION

AquaSKILLs

Stay afloat.
Remain calm.
Keep your head above water.
Be an observer.

Preparation

Float, tread water, swim.
Think about how to rescue yourself.
Don't thrash about, move arms and legs in slow circles.
Look around for something nearby that floats and is big enough to keep you afloat.
Look to see if someone is nearby.
If you can see someone, yell for help. If no one is close by, don't yell, save your strength.
Look for the closest safe place—a boat, the dock, land. Try to move yourself toward that location.

All children should know how to swim, float, and tread water. To teach these skills to your children, please contact the following:

Teach your children to dial 911 for help.

Accredited swimming instructor: _____

Where did you learn to swim? _____

Who taught you? _____

How old were you when you learned to swim? _____

AquaLESSON 4

REACH, THROW, OR ROW

☐ **Objective.** To learn to rescue others is **AquaSMART**.

This **AquaLESSON**:

- teaches the students that they can rescue someone else,
- teaches the students the safe methods for rescuing someone else, and
- encourages students to learn the safety rules that prevent dangerous situations.

☐ **Summary.** This lesson teaches the students the correct and safe procedures for rescuing another person. The lesson emphasizes the correct order for the rescue actions, and cautions the students against jumping in to save someone. The lesson reminds students to Dial 911 in an emergency.

☐ **Storyline.** The **AquaSMART** Team is at a birthday party at Shavannah's house. It is raining, and the Team is playing games indoors. Andre notices that Shavannah's little sister has gone out of the house and has fallen into the swimming pool.

NOT A MINUTE TOO SOON

*The **AquaSMART** Team is attending a birthday party at Shavannah's house. It's raining outside, so the Team is inside, playing games. Shavannah's mother is in the kitchen, putting the candles on the cake. Andre looks out the window, and sees something in the swimming pool. He runs outside to find that Shavannah's little sister, Eryn, is in the water. Eryn cannot swim. Andre can see that this is an emergency situation, and that he must do something at once. What should Andre do?*

☐ The **AquaCLUEs** emphasizes that quick action is necessary to save someone who cannot swim. Quick action, however, must be the right action, also. The following clues give the students the correct actions in the right sequence. Begin by telling each student that Eryn is in *big trouble*, and that she needs help fast. Explain to the class that, in emergency situations, the following actions will help them rescue someone without causing injury to themselves or other persons. The actions are REACH, THROW, and ROW. Write each action on the board as it is explained.

First AquaCLUE: *Reach, Throw or Row*

☐ **Time:** 20 minutes

This **AquaCLUE** teaches the students the correct measures for rescuing someone and the correct sequence for using them. At the same time, the students are taught, NEVER JUMP INTO THE WATER TO SAVE SOMEONE.

☐ **First Action: REACH**

First, try to reach for the person with your hand. Be sure the students understand that they should not reach over the edge of the pool. Instead, they should sit on the side and, if possible, hold onto the stair railing.

If you cannot reach them, use a pool skimmer, life preserver or stick. As you are reaching for the person, remind them to keep calm. If you can reach the person, instruct the person to hold on tightly so that you are able to pull them to the side of the swimming pool. Once at the side, help the person out of the pool. DO NOT jump into the pool to save the person. First, REACH for the person.

If the person in the pool cannot grab onto something, or you cannot reach the person, then, GO TO THE SECOND ACTION.

☐ **Second Action: THROW**

Look around the pool for something that will float, and is large enough to help the person stay afloat. This can include: pool furniture that can float, an ice chest, a wooden picnic bench or pool toys. Tell the person to hold on while you go for help. Tell them to be calm, and reassure them that you will be right back.

If there is no flotation device available, or the person cannot hang onto the device, GO TO THE THIRD ACTION.

☐ **Third Action: ROW**

Using an air mattress or an innertube, row or paddle out to the person. Remind the students that they must row out in something that can support at least 2 people. Most important, if they can't swim, don't row. As you are rowing out to the person, speak calmly, telling them that you are about to rescue them. If the person is thrashing about the pool, tell them to stop thrashing and take hold of your hand. If the person is yelling or screaming, tell them to be quiet so they can hear your instructions. When you have reached the person, tell him or her to hold onto the side of the mattress and "Row" them to safety. Remember, the third action is to ROW for the person.

☐ **Other Actions**

- Get help. In Andre's case, while he was reaching for Eryn, he should be calling for someone inside the house to come and help.
- If someone had come out of the house with Andre or had answered Andre's call for help, Andre should send them for an adult. If no adults are close by, have that person call 911.
- If the person pulled from the pool is hurt or not breathing, call 911. Cover the person with a blanket, towel or jacket and remain calm.

☐ **Preventive Actions**

Remind the students that prevention is the best strategy. Ask them how this accident could have been avoided. The answers can include:

- Keep swimming pools covered or fenced.
- Keep doors to outside locked, so toddlers cannot open them.

☐ **Return to the story.** Ask the children to provide a happy ending for the story. Be sure that the endings include both the correct actions, and preventive actions.

Second AquaCLUE: *I Can Rescue*

☐ **Materials:** Worksheet 1, scissors, paste or tape.

☐ **Time:** 25 minutes

Distribute Worksheet 1. Read or have the students read the five actions listed on the worksheet. Explain that the actions are not in the correct order. Ask the students to cut apart the worksheets along the dotted lines. Then, have them rearrange the order, so that the actions are in the correct order taken. For instance, place, "Reach out for the person" in slot #1, and so on. When the students have completed the worksheet, go over it with them, and remind the students that these actions must be taken in the correct order, and that they should never jump into the pool to save someone. Have the student paste the actions, in their correct order, on the remaining side.

Third AquaCLUE: *Reach, Throw Or Row*

☐ **Materials:** Worksheet 2, percussion instruments.

☐ **Time:** 15 minutes plus practice time

Worksheet 2 contains the words to the song, "Reach, Throw or Row". The song can be sung to a rap cadence. If possible, have one of the students use a drum to set the beat. Duplicate the words and have the students sing along.

Fourth AquaCLUE: *Rescue Actions-Preparation List*

☐ **Materials:** Pencial and paper.

☐ **Time:** 20 minutes

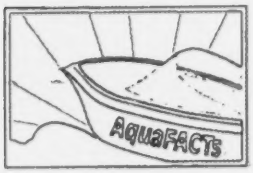
Have the students develop a Rescue Actions-Preparation List, adapting what they have learned for rescuing someone who has fallen into a pool to someone who is drowning in a lake, river or ocean.

These can include:

- Learn to swim.
- Wear life jackets, especially those under 7 years of age and those who cannot swim.
- Be wary of places that might be dangerous.
  - Slippery river banks.
  - Rough water at the ocean, river or lake.
  - Swift currents.
- Learn proper rescue actions and procedures: Reach, Throw or Row.
- Cover swimming pools, and lock gates.
- Keep safety equipment readily available.
- Swim where there is a lifeguard.
- Swim with a responsible adult.

Suggested Vocabulary and Spelling Expander

Rescue	Dangerous
Picnic bench	Pool toys
Breathing	Equipment
Slippery	Prepare



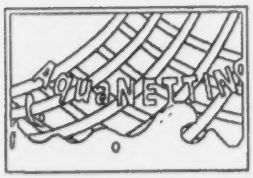
If you learn the correct procedures, and follow them, you can save someone else.

Remain calm, and try to keep the drowning person calm.

Dial 911.

Remember preventive actions so that these dangerous situations do not occur.

IT IS AquaSMART TO LEARN TO FLOAT AND TREAD WATER.



First AquaNET: Rescue Actions

Remind the students to take Worksheet 1 home to their family. Ask them to share the correct rescue actions with their family. Ask the students to remind their family that a pool cover and locked pool fence gates are good ways to prevent accidents.

Second AquaNET: Children's Literature Selections

O'Connor, Patrick, *The Raising of the Dughe*, Ives Washburn, Inc., N.Y., 1964.
Yameguchi, Tohr, *Two Crabs and Moonlight*, Holt, Rinehart and Winston, N.Y., 1965.
Meadowcroft, Enid LaMonte, *When Nantucket Men Went Whaling*, Garrard Publishing Company: Champaign, IL, 1966.
Rand, Gloria, *Salty Sails North*, Henry Hold & Co., N.Y., 1990.

AquaCOPY

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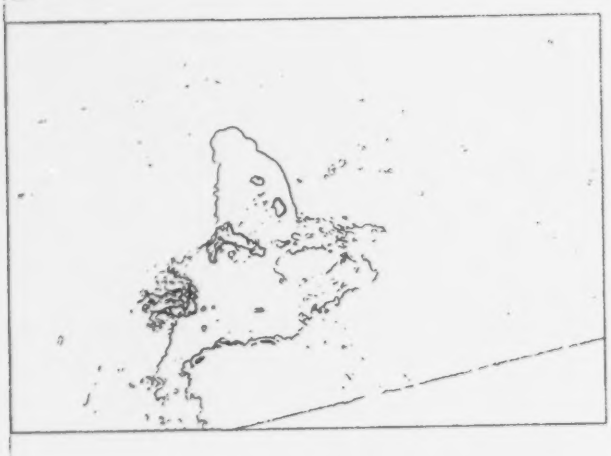
NOT A MINUTE TOO SOON



The **AquaSMART** Team is attending a birthday party at Shavannah's house. It's raining outside, so the Team is inside, playing games. Shavannah's mother is in the kitchen, putting the candles on the cake. Andre looks out the window, and sees something in the swimming pool. He runs outside to find that Shavannah's little sister, Eryn, is in the water. Eryn cannot swim. Andre can see that this is an emergency situation, and that he must do something at once. What should Andre do?

AquaCOPY

Name: _____ Date: _____

LESSON 4, WORKSHEET 1 I CAN RESCUE

SECOND AquaCLUE

RESCUE ACTIONS

Throw something that floats to the person.

1.

Reach out for the person.

2.

Paddle on an air mattress or surfboard to the person.

3.

Call 911

4.

Reach with a pole or stick.

5.

RESCUE ACTIONS

AquaCOPY

Name:_____ Date: _____

LESSON 4, WORKSHEET 2

FIRST AquaCLUE

REACH, THROW, OR ROW, THAT'S ALL YOU NEED TO KNOW!

first you wanna reach
use your arm, or your leg
and reach...
and reach...
grab a shirt, grab a branch
grab a rope, grab an oar
and reach...
and reach...
reach the person in the water
and assist them to shore

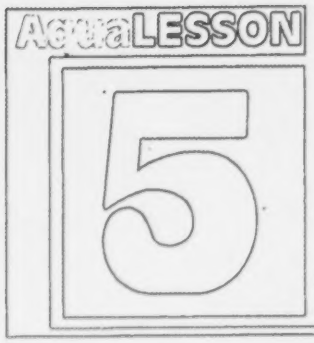
REACH, THROW OR ROW, THAT'S ALL YOU NEED TO KNOW!

if they're too far out
then your gonna have to throw
and throw...
and throw...
toss a ball, toss a toy
toss anything that floats
and throw...
and throw...
throw it close to the person
and assist them to float

REACH, THROW OR ROW, THAT'S ALL YOU NEED TO KNOW!

if you can't reach, or throw
then your gonna have to row
and row...
and row...
row a mattress, row a log
paddle something like a boat
and row...
and row...
row it out to the person
and assist them to shore

REACH, THROW OR ROW, THAT'S ALL YOU NEED TO KNOW!
BE AquaSMART!



LOOK BEFORE YOU LEAP

☐ **Objective.** Be **AquaSMART**, look before you leap.

This **AquaLESSON**:

- teaches that canals are not for swimming,
- develops an awareness of the dangers of entering water that is unknown, and
- teaches students to read signs, and obey them.

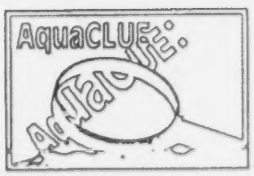
☐ **Summary.** This **AquaLESSON** encourages students to make the right decisions when tempted by a dangerous situation. Also, the lesson teaches that making right decisions applies to many other situations. Finally, the lesson emphasizes the importance of prevention.

☐ **Storyline.** Justin and Andre heard about a great place to swim, the canal near their home. Since they heard about it from Andre's older brother, they thought it was OK for them to go swimming there, too. Their adventure teaches them to look before they leap.

LOOK BEFORE YOU LEAP

It was a hot summer day, and Justin and Andre were trying to decide what to do. Andre told Justin that he heard his older brother and friends talking about swimming in the canal, just outside of town. They were talking about how they took along an air mattress and floated downstream. Justin and Andre decided to go for a swim in the canal. They did not tell Justin's mother because they were afraid she would not let them go.

When Justin and Andre reached the canal, they noticed a sign that said "No Trespassing". Since it did not say, "No Swimming", the boys were not sure if it was safe to go swimming or not. They used their ***AquaVISION*** *and saw junk at the bottom of the canal. If you were with Andre and Justin, what would you have done?*



The **AquaCLUEs** teach the students to never swim in a canal or bayou and reminds them to tell a responsible adult where they are going, to read and obey signs, and to look before they leap into unknown water.

First AquaCLUE: *The Importance of Signs*

☐ **Materials:** Worksheet 1.

☐ **Time:** 30-45 minutes

Distribute Worksheet 1.

- Explain to the students that, in our daily lives, we frequently use signs to communicate.
- Ask the students to match the words with the signs.
- Ask the students why we use signs instead of words. Be sure that they understand that signs can be universal, that means, everyone can understand, even if they cannot read, or do not know English. Signs enable a person to understand the message quickly, even when traveling at 60 mph in a car.
- Reinforce the 2 Cs: signs are used to **communicate** a message simply so that we may **comprehend** the message.

Then ask the students why it is important to communicate and comprehend.

- Understanding.
- Meet needs.
- Avoid danger.
- Explain to the students that some signs give information and some alert us to a law. Give them an example. Taxi, for example, gives information. It tells us where we can find taxi service. No smoking, on the other hand, alerts us to a restricted behavior. In this place, we cannot smoke.
- Have the students review Worksheet 1 and identify those signs that give information, and those that remind us of our responsibility.

Second AquaCLUE: *Know Danger Words*

☐ **Materials:** Worksheet 2.

☐ **Time:** 30 minutes

Some words warn us of danger and save us from injury or worse. Distribute Worksheet 2 to each student. Have them read the words. Then, let them select 3 or 4 words and draw a sign that communicates the words.

Discuss the sign, "No Trespassing". Ask the students if it gives information, or reminds us of our responsibility. Explain, it is a warning. Ask the students why the owner of the property wants to keep you out. They can include:

- the water is too swift for swimming.
- the sides of the canal are too steep to climb out.
- the bottom may be covered with broken glass, metal or garbage.
- the area is unattended, adding to the danger.

☐ **Return to the story.** Ask the students what were the danger words that Andre and Justin saw.

Ask the students to talk about the signs they see by the water near their home. For example, at the beach, flags designate the danger level of the water, and at motel pools, some signs say "No Lifeguard." Remind them that signs communicate important messages that are meant to keep them safe.

Third AquaCLUE:
Sequence and Consequence: Making the Right Decisions

☐ **Materials:** Worksheet 3, crayons, marker pens.

☐ **Time:** 30 minutes

This **AquaCLUE** teaches the students that actions have logical consequences. Distribute Worksheet 3, and ask the children to make a story map. This exercise "maps" the **AquaHAZARD** story, highlighting the spots where Justin and Andre made their decisions, and illustrates what happened to them.

a. First, have students match the sentences with the stops on the story map. Then, have students draw Andre and Justin at each stop.

b. Illustrate on the board the "begin", "stops", and "end" on the story map. The stops are:

Begin: Overheard others say they went to the canal. (Draw Andre listening to his brother and his brother's friends.)

Stop 1: Talking about going to the canal. (Draw Justin and Andre discussing the adventure.)

Stop 2: Decided to go to the canal. (Draw Justin and Andre starting out for the canal.)

Stop 3: Decided not to tell responsible person. (Draw Justin and Andre passing Andre's mother.)

Stop 4: Arrived at canal.

Stop 5: Saw the sign, "No Trespassing". (Draw Justin and Andre looking at the sign.)

Stop 6: Saw that canal was deep but narrow.

Stop 7: Used their **AquaVISION** to see junk at the bottom of the canal.

End: How did it end? (Decided not to swim in the canal.)

Fourth AquaCLUE: *Parley Garfield and the Frogs*

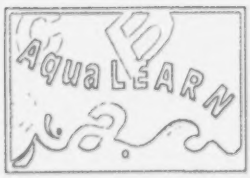
☐ **Materials:** Worksheet 4.

☐ **Time:** 20 minutes

☐ **Return to the story.** This **AquaCLUE** is appropriate for younger students. It reminds the students that, if you don't look before you leap, you may get in deeper than you thought.

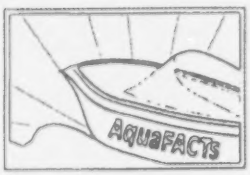
- Tell the story, "Parley Garfield and the Frogs"*
- Have students repeat the refrains:
  1. How deep is it?
  2. Ankle-deep (and so on).
- Discuss: if you ask the right person, you'll get the right answer, and if you ask the right question, you'll get the right answer.
- Have the students discuss the questions Justin and Andre should have asked before they made the decision to swim in the irrigation canal, and to identify the persons they should have asked.

* MacDonald, Margaret Read, Twenty Tellable Tales, The H.W. Wilson Company, 1989.



Suggested Vocabulary and Spelling Expander

Trespassing	Leap
Information	Unknown
Air mattress	Irrigation
Communicate	Comprehension



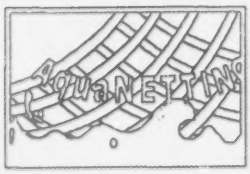
Never swim in a canal.

Look before you leap.

Dangerous situations can be avoided and accidents prevented if you read and obey signs.

Always tell a responsible adult where you are going.

BE AquaSMART, LOOK BEFORE YOU LEAP.



First AquaNET: *Children's Literature Selection*

Hayes, Will, *Good Times On Boats*, Melmont Publishers, Inc., Chicago, IL, 1963.
Sperry, Armstrong. *Call It Courage*, The Macmillan Company, N.Y., 1940.
Lathrop, Dorothy P., *Follow The Brook*, The Macmillan Company, N.Y., 1960.

AquaCOPY

Name:_____ Date: _____

LOOK BEFORE YOU LEAP

It was a hot summer day, and Justin and Andre were trying to decide what to do. Andre told Justin that he heard his older brother and friends talking about swimming in the canal, just outside of town. They were talking about how they took along an air mattress and floated downstream. Justin and Andre decided to go for a swim in the canal. They did not tell Justin's mother because they were afraid she would not let them go.

When Justin and Andre reached the canal, they noticed a sign that said "No Trespassing". Since it did not say, "No Swimming", the boys were not sure if it was safe to go swimming or not. They used their **AquaVISION** and saw junk at the bottom of the canal. If you were with Andre and Justin, what would you have done?

AquaCOPY

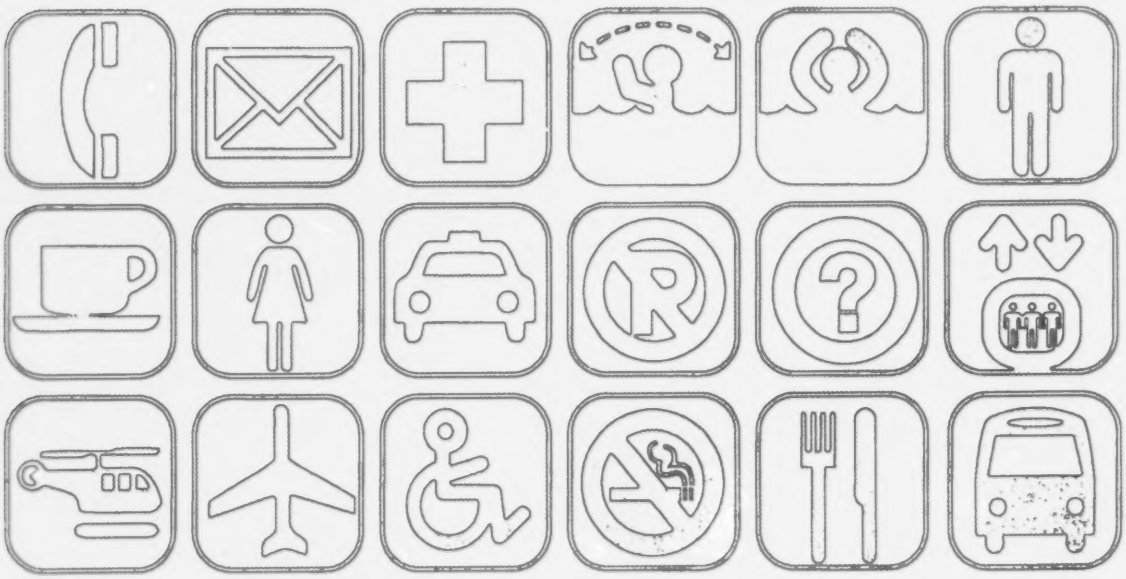
Name:_____ Date: _____

LESSON 5, WORKSHEET 1 PICTURES AND WORDS

FIRST AquaCLUE

Before early people could write they communicated with pictures. Even today we use pictures, signs and symbols to communicate. Many of the signs are used worldwide.

See if you can tell what the following symbols and signs communicate to us.



Did you find the following:

Taxi	Handicap	First Aid	HELP! (one arm waving overhead)
No Smoking	Restaurant	Elevator	Bus
Telephone	Information	Coffee Shop	Helicopter
Air Transportation	Mail	OK In The Water (two arms overhead)	No Parking
Women's Restroom	Men's Restroom		

INSTRUCTIONS:
Emphasize the water-related signs.

AquaCOPY

Name:_____ Date: _____

LESSON 5, WORKSHEET 2 KNOW THE DANGER WORDS

SECOND AquaCLUE

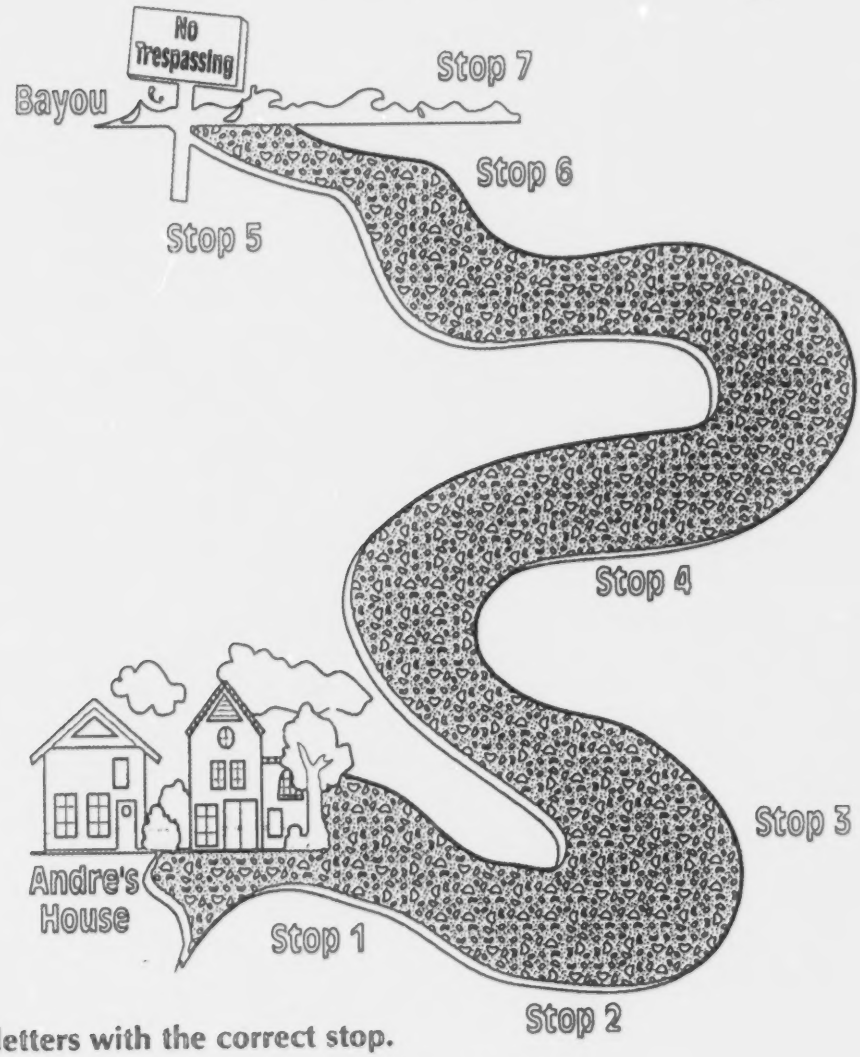
DANGER WORDS	WHAT DO THEY MEAN?
No Fires	
No Swimming	
No Trespassing	
No Smoking	
Danger	
Deep Water	
Flammable	
Polluted	
Caution	
High Voltage	
Don't Drink	
Gasoline	

AquaCOPY

Name: _____ Date: _____

LESSON 5, WORKSHEET 3 DECISION MAP

THIRD AquaCLUE



Match the letters with the correct stop.

A. Andre and Justin do not tell anyone where they are going.

B. Andre and Justin see a no trespassing sign.

C. Andre and Justin decide to go to the bayou.

D. Andrea hears his brother talking about swimming in the bayou.

E. Andre and Justin decide not to swim.

F. Andre and Justin set off for the bayou.

Draw Andre and Justin on the story map.

INSTRUCTIONS:
See Third AquaCLUE for correct sequence.

AquaCOPY

Name:_____ Date: _____

LESSON 5, WORKSHEET 4 PARLEY GARFIELD AND THE FROGS

FOURTH AquaCLUE

Now when my grandpa, Parley Garfield, was a boy
He had to cross the crick to see my grandma every night.

Most times in the summer when the cricks run dry
he could just *walk* across on the flat rocks.

But in the spring when the hard rains came that crick would flood.

Then he'd come down to the edge of the crick
and he wouldn't know whether or not it was too deep to wade through.

Now there was a family of frogs that lived at the place where the crick pooled there.
And they'd come along and help him out. Grandpa'd call out to the frogs:
"How DEEP is it?
How DEEP is it?
How DEEP is it?"

Now the little ones at the edge of the crick they'd call back:
"Ankledeep!
Ankledeep!
Ankledeep!"

So Grandpa'd take off his shoes and wade in a bit.
Out a little further the frogs grew a little bigger. Grandpa'd call to them:
"How DEEP is it?
How DEEP is it?
How DEEP is it?"

And that bunch of frogs would call right back:
"Kneedeep!
Kneedeep!
Kneedeep!"

So Grandpa, he'd roll up his pants legs and wade in a little more.
Then he'd call to the big old frogs way out toward the middle.
"How DEEP is it?
How DEEP is it?
How DEEP is it?"
Bellydeep!
Bellydeep!"

Grandpa wanted to see grandma awfully bad.
So he'd just wade right on in up to his belly and get all wet. Then he'd stop.
And Grandpa'd call out to that old Granddaddy Bullfrog who lived right out in the middle of the pond:
"How DEEP is it?
How DEEP is it?
How DEEP is it?"

And that old Granddaddy Bullfrog'd bellow back:
"YOU BETTER GO ROUND!
YOU BETTER GO ROUND!
YOU BETTER GO ROUND!"

61

Then Grandpa knew he'd have to go round and find another place to ford the crick *that* night
if he wanted to see Grandma at all. I've heard my grandpa tell that story many a time.

Reprinted from "Twenty Tellable Tales," Margaret Read MacDonald, H.W. Wilson (1989)

AquaLESSON 6

DON'T OVERLOAD YOUR BOAT

☐ **Objective.** Don't overload your boat, and learn "balance and counterbalance".

This **AquaLESSON**:

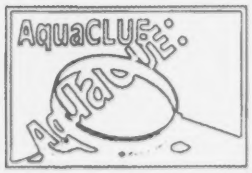
- teaches students that boats are unstable,
- warns students that an overloaded or unbalanced boat can capsize even when there is no wind, and the water is calm, and
- teaches the concepts of balance and counter-balance.

☐ **Summary.** This lesson teaches the students that boats, even large boats, are unstable, and that operating a boat safely requires good judgment, proper behavior, and adequate preparation. The lesson teaches proper behavior, seating, and the number of persons a boat can safely seat. The students are introduced to the concepts of balance and counter-balance, and are taught the meaning of capacity, the reason for limiting the capacity of a boat, and a method to calculate the correct number of persons who can safely be in a boat while it is underway.

☐ **Storyline.** Boating can be lots of fun, but it is necessary to know how to handle the boat, where it is safe to sit, and how many persons can safely be in the boat when it is underway. An important concept in this lesson is balance and counter-balance.

AN UNFORTUNATE DAY

*The **AquaSMART** Team was invited to Lora's cabin at the lake. The Team decided to go down by the lake and play in the boat tied to the dock. The Team gets into the boat, pretending they are sailing away. The boat begins to move away from the dock and Justin, who is standing up, loses his balance and falls into the water. As Lora reaches out to help Justin the rest of the Team go to Lora's side of the boat to help. The added weight of all the Team members on Lora's side of the boat makes it tip, dumping the boys into the water. What did the Team do wrong?*



The **AquaCLUEs** help the students understand how unstable a boat can be. To stabilize the boat, the students learn that the number of persons that can safely be seated in a boat is limited, and how to know what the limit is. Also, they learn the concepts of balance and counter-balance, how to seat boaters in the proper place, and the procedures and conditions for changing the seating arrangement when changes are necessary.

First AquaCLUE: *Balance and Counter-Balance*

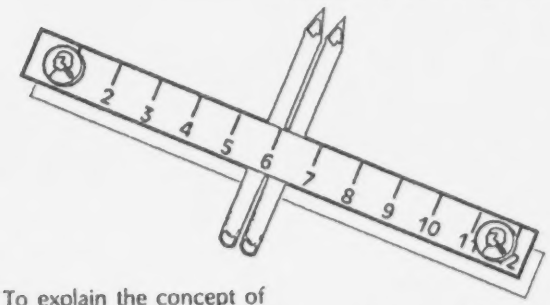
☐ **Materials:** Two pencils, ruler, pennies, Worksheet 1.

☐ **Time:** 20 minutes plus discussion

The **AquaCLUEs** are balance and counter-balance. The students learn that everyone in a small boat must:

- step toward the middle of the boat when getting in,
- distribute their weight in the boat,
- sit in the proper place,
- remain seated,
- change places carefully, and
- counter-balance when required.

To explain the concepts of balance and counter-balance, use a ruler and two pencils. Place the two pencils side by side on a flat surface. Similar to a seesaw, balance the ruler on the two pencils; a 12-inch ruler should balance at the 6-inch line (see diagram).



To explain the concept of balance, have students place an equal amount of pennies on each end of the ruler; the ruler will balance properly.

To explain the concept of counter balance, place a stack of three or four pennies on one end of the ruler. Ask students to add pennies to the opposite end of the ruler until it becomes balanced.

Have students experiment by placing two pennies (one on each side) in different locations on each side of the ruler. Point out that location of the pennies affect the balance of the ruler, also.

Have students experiment by placing two pennies on one end of the ruler and one penny on the other end. Carefully slide the two pennies toward the middle of the ruler. The ruler will balance at the point where the lesser distance away from the center compensates for the extra weight of the two pennies.

Correlate the balancing of the ruler to the balancing of a boat. The center of the ruler (where the ruler balances on the pencils) represents the center point of a boat. The pennies represent people or gear that occupies the boat. Proper balancing of a boat directly correlates with the balancing of the ruler.

- Why is it important to place the coins carefully?
- What does balance mean?
- How do you maintain balance so that the ruler doesn't tip?
- What happens when pennies are placed at different distances from the center of the ruler on each side?
- What happens when more pennies are placed on either side of the ruler? Can the ruler be balanced with more pennies on one side?

Entering a small boat:

Entering or exiting a small boat can be dangerous. If not tied up properly, the boat can move out from under you. Standing on the side (gunwale) of a small boat can capsize it.

Always step into the center of a boat while keeping your center of gravity as low as possible. That means, bend your knees and stay low. Entering a boat in this way will assure the boat's stability. When loading gear and supplies in a boat, have someone on the dock hand the items to you while you are sitting. If alone, place items on the dock where you can easily reach them while in the center of the boat. When leaving a boat, always hand items to someone on the dock before you exit. If alone, place items on the dock, then exit the boat.

Distribute Worksheet 1. Ask the students to complete the drawings.

Second AquaCLUE: *The Capsized Boat*

☐ **Materials:** Worksheet 2.

☐ **Time:** 30-45 minutes

Distribute Worksheet 2.

The objective of the worksheet is to help them make good choices by understanding that good decisions lead to good results. The exercise is based on "Fortunately, Unfortunately" by Remy Charlip. Ask the students to think of a time when something they did started out as fun, but ended being quite different. Begin with an oral exercise, and then ask the students to write either a real or make-believe story starting with Fortunately, one day I . . .

☐ **Return to the story.** Have the students think about the **AquaSMART** Team , and the things they did or did not do to make the day unfortunate. Have the students mention how the **AquaSMART** Team could have changed an unfortunate to a fortunate day on the boat.

Third AquaCLUE: *Capacity—Safety in Numbers*

☐ **Materials:** Worksheet 3.

☐ **Time:** 30 minutes plus research homework

This **AquaCLUE** makes students aware of signs that limit attendance or participation. One important sign of this

type is a capacity plate. Capacity plates are required by law on motorboats less than 20 feet in length and built after October 1972. Capacity plates give the information on the amount of people a boat can carry, the maximum weight of people and gear, and, if your boat has an outboard motor, how large a motor the boat can handle. The plate must be located close to where the driver operates the boat. Sailboats, inflatable boats, canoes, and kayaks, are exempt from the law.

This **AquaCLUE** involves a research project. Ask the students to think of places where there is a need to limit the number of persons present. Mention that many of these places have a capacity plate posted. Discuss the meaning of a capacity plate.

Ask the student to choose a partner and distribute Worksheet 3. For younger students, the teacher may elect to do this exercise as board work. Ask the students to think of places where the capacity is limited. Mention that these places usually have a sign posted. Have them complete Worksheet 3 as follows:

Place. The name of the place where the capacity is limited. Some of the places include the school auditorium, the school parking lots, elevators, theaters, and meeting rooms. Be sure the students include boats.

Capacity Sign. Have the students recall if they have seen a capacity sign limiting the number of occupants. Ask them to describe the signs they have seen. Explain that boats have Capacity Plates. The sign (plate) includes information about the maximum number of persons that can be safely carried in the boat and the maximum weight that the boat can carry. The capacity plate is located where the boat operator sits.

Reasons to Limit Capacity. The most important reason is the safety of the occupants.

Review the importance of limiting the number of occupants in a boat. Be sure to mention that the correct number permits the boaters to balance and counter-balance the boat. Ask the students to look for the capacity plate on boats. Ask them to look for capacity signs when they are on trips outside their home.

Fourth AquaCLUE: *The Right Number of Persons*

☐ **Materials:** Worksheet 4, 5, rope or cord at least 30 feet long, yardstick.

☐ **Time:** 20 minutes for discussion, 35 minutes for worksheet

Worksheet 4 contains two drawings. Distribute the worksheet to the students, and ask them which boat is overloaded. Lead the discussion as follows:

- The area between the waterline and the top of the boat's sides is called the "freeboard." The freeboard is the space between the water and the top of the boat. Freeboard provides protection from waves because the waves are less likely to go over the sides of the boat.
- Picture #1 has a small area between the waterline and the top of the boat's sides. That means, there is very little freeboard showing. The reason is that there is too much weight in the boat. The danger is that waves may overlap the sides of the boat, filling it with water. Even though the surface of the water may be calm, wakes or waves caused by other boats or gusts of wind may be large enough to splash over the sides of the boat in Drawing #1.
- Picture #2 shows that there is enough freeboard to protect the occupant from overlapping waves.
- Remind the students that they can observe the freeboard when they are aboard a boat. It is a good indicator of safe boating.

This part of the **AquaCLUE** is suitable for older students. Worksheet 5 contains a diagram for calculating the correct number of persons that a small boat can safely carry. Since some vessels are exempt from having capacity plates, such as canoes, kayaks and vessels built before 1972, a simple formula has been developed to determine the number of occupants a boat can hold. It teaches them to calculate the proper number of occupants that can be carried safely in a boat. Ask the students if they could find out how many occupants a boat can hold if the boat does not have a capacity plate. Explain to them that there is an easy way to do this. The formula is:

$$\frac{\text{(Boat length X Boat Width)}}{15} = \text{Number of Occupants}$$

Example:

$$\frac{(14 \times 6 = 84)}{15} = 5\ (5.6)\ \text{people}$$

Note: Always round down. The correct answer above is 5 people.

Write the formula on the blackboard.

Using a piece of rope or heavy cord 30 feet long, outline a row boat 4 feet across the back, 12 feet long and 4 feet at midsection. An example diagram is shown on Worksheet 5. Using yardsticks, ask the students to calculate the correct number of occupants. Teach the students to measure the width of the boat at the midsection. Then, ask them to calculate the proper number of occupants for that boat. Teachers may use Worksheet 4 and the boat dimensions instead of using a rope to outline a boat on the floor.

Suggested Vocabulary and Spelling Expander

Overboard	Freeboard
Capacity	Fortunate
Balance	Unfortunate
Wakes	Calculate

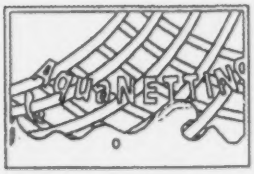
All boats are unstable, even big ones.

Capacity signs should be obeyed.

If no capacity plate is available, you can calculate the correct number of occupants for your boat.

Observing the amount of freeboard can keep your boat from sinking.

BE AquaSMART, DON'T TIP THE BOAT. INSTEAD, BALANCE AND COUNTER-BALANCE.



First AquaNET: *The Capacity Plate*

☐ **Materials:** Worksheet 6.

Reproduce the Capacity Plate Information shown in Worksheet 6. Ask the students to take the capacity plate home to show and explain it to their family.

Second AquaNET: *Children's Literature Selections*

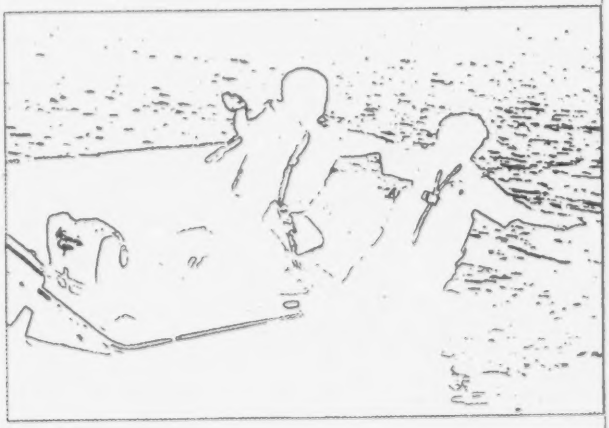
Lexau, Joan M. *Archimedes Takes A Bath*, Thomas Y. Crowell Company, N.Y., 1969.
Gudmundson, Shirley, *The Turtle Net*, George Braziller, N.Y., 1965.
Murphy, Shirley Rousseau, *Tattie's River Journey*, The Dial Press, N.Y., 1983. (An Easy To Read Book)
Charlip, Remy, *Fortunately, Unfortunately*, Four Winds Press, N.Y., 1985.

AquaCOPY

Name:_____ Date: _____

AN UNFORTUNATE DAY

The **AquaSMART** Team was invited to Lora's cabin at the lake. The Team decided to go down by the lake and play in the boat tied to the dock. The Team gets into the boat, pretending they are sailing away. The boat begins to move away from the dock and Justin, who is standing up, loses his balance and falls into the water. As Lora reaches out to help Justin the rest of the Team go to Lora's side of the boat to help. The added weight of all the Team members on Lora's side of the boat makes it tip, dumping the boys into the water. What did the Team do wrong?



AquaCOPY

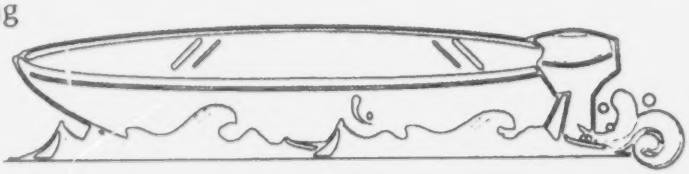
Name:_____ Date: _____

LESSON 6, WORKSHEET 1

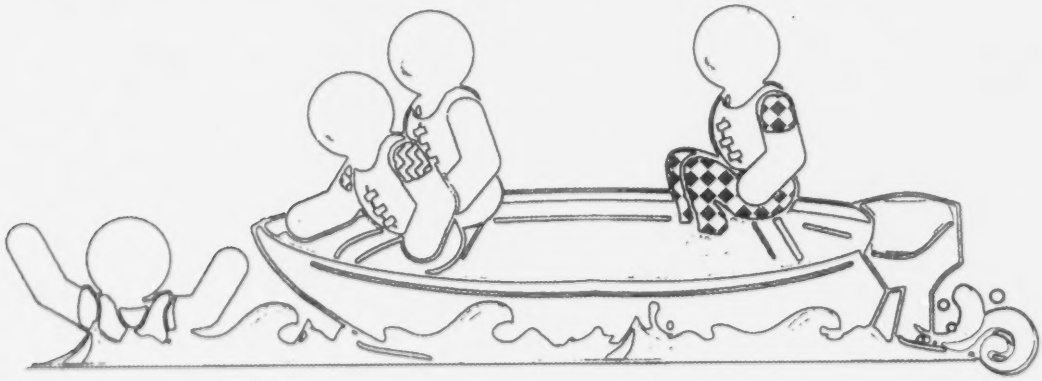
FIRST AquaCLUE

BALANCE — COUNTER-BALANCE

1. Draw 2 boaters.
2. Place them so the boat is balanced.
3. Be sure the boaters are wearing life jackets.
4. Color the life jackets orange.



1. Circle the boater reaching into the water.
2. Draw an arrow to the seat where another boater should move to counter-balance the boat.



Name:_____ Date: _____

LESSON 6, WORKSHEET 2

SECOND AquaCLUE

FORTUNATELY – UNFORTUNATELY

☐ Read *Fortunately, Unfortunately,* by Remy Charlip.

☐ Think of a time when something you did started out fun but ended up being quite different.

Fortunately, one day I _____

_____

_____

_____

Unfortunately, _____

_____

_____

_____

Fortunately, _____

_____

_____

_____

Unfortunately, _____

_____

_____

_____

But fortunately, _____

_____

_____

_____

INSTRUCTIONS:
Have the students complete the exercise similar to the example in the reading.

AquaCOPY

Name:_____ Date: _____

LESSON 6, WORKSHEET 3

THIRD AquaCLUE

CAPACITY – SAFETY IN NUMBERS

PLACE	REASONS TO LIMIT

INSTRUCTIONS:
Have the students write in the location of capacity signs they have seen.
Then, ask them to think of the reasons the number of persons is limited.

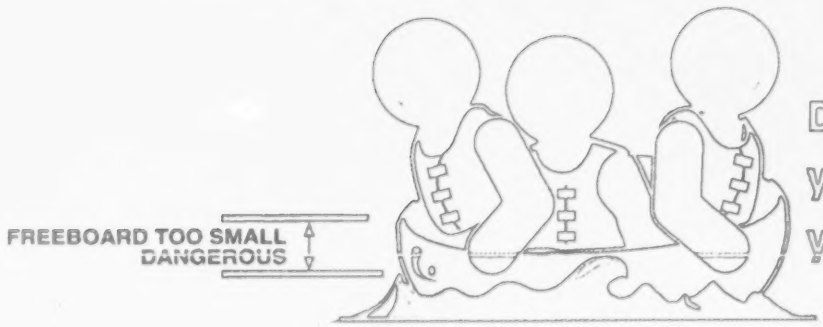
AquaCOPY

Name: _____ Date: _____

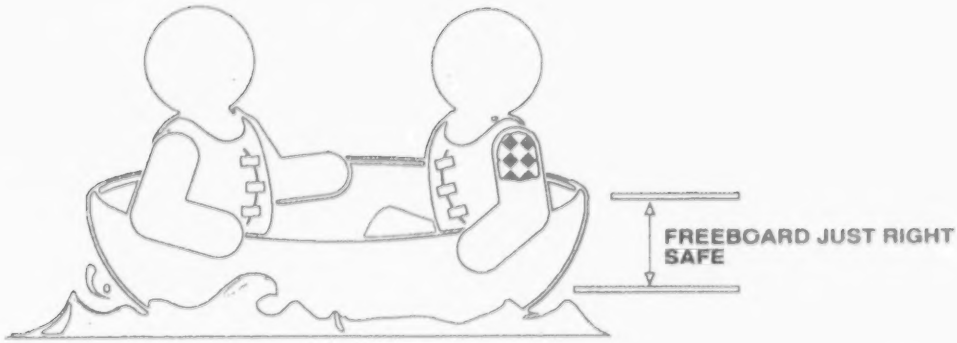
LESSON 6, WORKSHEET 4

FOURTH AquaCLUE

DON'T SINK YOUR BOAT



Don't overload - you'll sink your boat !



INSTRUCTIONS:
See the Fourth AquaCLUE for instructions.

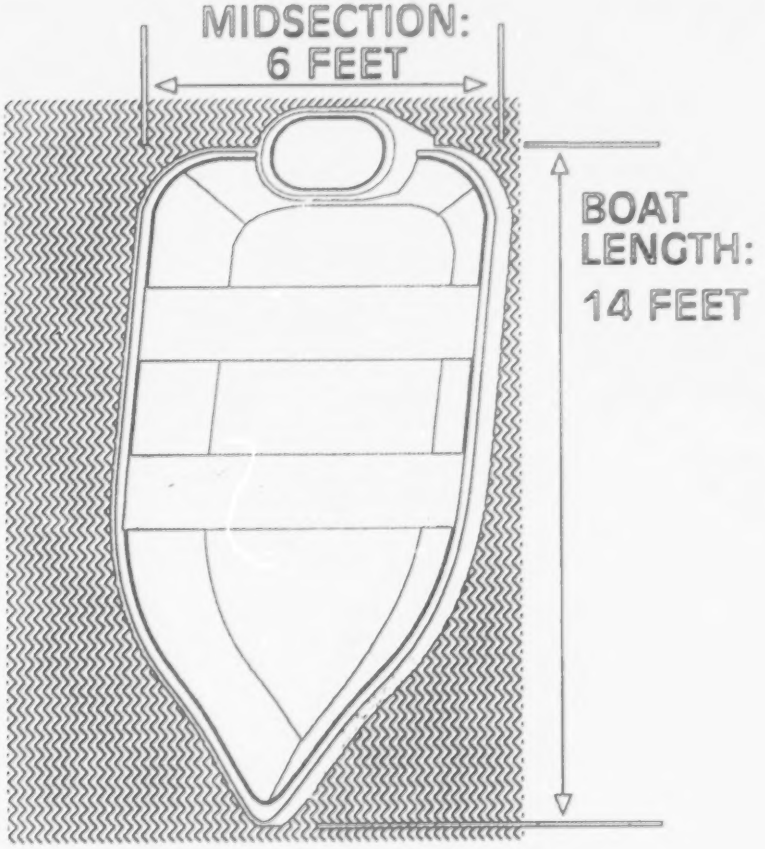
AquaCOPY

Name:_____ Date: _____

LESSON 6, WORKSHEET 5

FOURTH AquaCLUE

DIAGRAM FOR CALCULATING THE CAPACITY OF A BOAT



$$\frac{\text{Boat Length x Boat Width}}{15} = \text{Number of Occupants}$$

Students, write in the correct numbers:

$$\frac{\text{(Boat Length=}\_\_\_\_\text{) x (Boat Width=}\_\_\_\_\text{)}}{15} = \text{Number of Occupants } \_\_\_\_$$

71 (Round down to the nearest whole number)

AquaCOPY

Name:_____ Date: _____

LESSON 6, WORKSHEET 6

FIRST AquaNET

CAPACITY PLATE INFORMATION

U.S. COAST GUARD CAPACITY INFORMATION

MAXIMUM HORSEPOWER
MAXIMUM PERSONS CAPACITY (POUNDS)
MAXIMUM WEIGHT CAPACITY
(PERSONS, MOTOR & GEAR) (POUNDS)

THIS BOAT COMPLIES WITH U.S. COAST GUARD SAFETY STANDARDS IN EFFECT ON THE DATE OF CERTIFICATION

MANUFACTURER: HAPPY BOAT CO.
COLUMBIA, MICHIGAN

MODEL: 838

COMPLIANCE WITH THE FOLLOWING U.S. COAST GUARD REQUIREMENTS AND/OR BIA RECOMMENDATIONS IS VERIFIED

LOAD AND HP CAPACITY ○ BASIC FLOTATION
NAVIGATION LIGHTS ○ STEERING SYSTEM
COMPARTMENT VENTILATION

BOATING INDUSTRY ASSOCIATIONS

AquaLESSON 7

STAY WITH YOUR BOAT

☐ **Objective.** Be **AquaSMART**. If you fall overboard, stay with your boat.

This **AquaLESSON**:

- prepares students for unexpected emergencies,
- teaches students to stay with the boat if they fall overboard, and
- reminds students of the importance of having a plan for emergencies.

☐ **Summary.** This **AquaLESSON** teaches the students to stay with the boat should the boat unexpectedly overturn. The lesson reviews learning to swim, wearing a life jacket, learning to float and tread water, and the importance of telling a responsible adult where you are going, and what time you expect to return.

Also, the students learn that it is important to be prepared for unexpected accidents and emergencies. For these unexpected events, the students are reminded to remain calm, be an observer, and use the skills they have already learned.

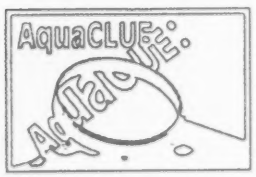
☐ **Storyline.** While two members of the **AquaSMART** Team are out on the lake, a sudden gust of wind capsizes their 2-person sailboat. The Team members are thrown into the water. The focus of this story should be that, even though the **AquaSMART** Team took preventive actions, unexpected events do occur.

AN UNEXPECTED SPILL

Lauren and Andres decide to go sailing in Lauren's sailboat. Lauren tells her mother that she and Andres are going out in the sailboat and that they expect to be home in about two hours.

The boat is just big enough for the two of them. Before Lauren and Andres get into the sailboat, they put on their life jackets. As they get into the boat, they are careful to sit so that the boat is balanced.

Lauren is a good sailor. The lake is calm but the wind is brisk. Soon she and Andres are far from shore. Suddenly, there is an unexpected gust of wind, and the sailboat capsizes. Lauren and Andres are thrown into the water. What do you think they should do?



The **AquaCLUE**s teach the students that, when a boat capsizes, it is safer to stay with the boat than to try to swim to shore, especially if there is some distance between the boat and the shoreline. Remind the students that the shore usually looks closer than it really is.

It is important to stay with the boat because it is easier to see a boat than heads bobbing in open water, and you can hold onto the boat. Also, the **AquaCLUE**s remind the students that it is important to tell a responsible adult where they are going, and what time they expect to return.

First AquaCLUE: *Stay With The Boat*

☐ **Materials:** Worksheet 1.

☐ **Time:** 30 minutes

Pass out Worksheet 1, Stay With the Boat. Explain that each sentence is taken from the story, "An Unexpected Spill". Ask the students to number the 10 sentences in proper sequence, describing what happened to Lauren and Andres. Explain that the sequence, or sentence #1 should be that Lauren and Andres decide to go sailing. The sentences on Worksheet 7 should be numbered 5, 7, 3, 1, 6, 2, 9, 4, 8, and 10.

☐ **Return to the story.** Ask the students what were the things that Lauren and Andres did that followed the safety rules they have learned. Their responses should include:

- Told Lauren's mother that they were going sailing,
- Told Lauren's mother what time they expected to be home,
- Put on their life jackets,
- Were careful to sit so that the boat was balanced, and
- Prepare a float plan before going out on the boat.

Once the boat is capsized, ask the students what they think Lauren and Andres should do. Help them understand that even the **AquaSMART** Team members should stay with the boat. The reasons are:

- The distance to the shore is difficult to calculate,
- A current between the boat and the shore may keep them from reaching the shore,
- It is easier to see bobbing heads near a boat than in open water. Explain that the boat acts as a focal point for the searchers, and
- You can hold onto the boat.

Second AquaCLUE: *Water Tips*

☐ **Materials:** Worksheet 2.

☐ **Time:** 45 minutes

Students in Texas are more likely to be familiar with water sports on rivers, oceans and lakes. This **AquaCLUE** reviews the variety of water types found in Texas, and helps them identify some of the characteristics that are commonly associated with each.

Pass out Worksheet 2.

- Read the column marked Water Characteristic or Activity.
- Read the four types of water: pools, rivers, lakes, and oceans.
- For each activity or characteristic, ask the students to write "yes", "sometimes" or "no" under each type of water. Example: for fast current, the students would write "no" under pool, "yes" under river, "no" under lake, and "no" under ocean.

The last line should be completed by the entire class. Ask the students to remember some of the safety rules they have learned for each body of water. Remind them that some of the rules, such as "tell a responsible adult where you are going", are appropriate for all bodies of water. Others, such as "float downstream feet first" are appropriate for rivers, only. Suggest that each body of water presents specific **AquaHAZARDs**, and that students should be aware of those **AquaHAZARDs** and be prepared for emergencies.

Third AquaCLUE: *A Crossword Puzzle*

☐ **Materials:** Worksheet 3.

☐ **Time:** Varies by student

This **AquaCLUE** reviews some of the words and rules learned in the lessons. Pass out Worksheet 3 to the students. There are two Worksheets 3, one contains the solution to the puzzle.

Fourth AquaCLUE: *Anything Can Happen*

☐ **Materials:** Worksheet 4.

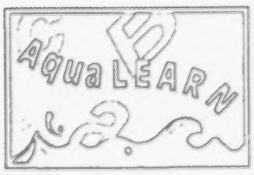
☐ **Time:** 35-45 minutes

This **AquaCLUE** reviews preparation for an emergency. Begin the **AquaCLUE** by reminding the students that they must be prepared for emergencies. **The best preparation is prevention,** the next is to know the rules and learn the skills that will keep an emergency from ending as a tragedy. The following activity helps the student learn the difference between prevention and preparation, and the importance of each. Distribute Worksheet 4.

Direct the students' attention to the column of emergencies and accidents. Ask them to write in the Prevent column the rules that would prevent the emergency from happening.

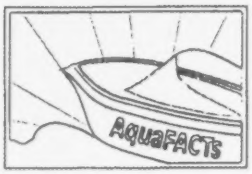
Then, in the event an accident happened, ask them to write in the Prepared column the skills and actions that would help them keep the emergency from becoming worse. Many of the prevention and preparation rules apply to more than one emergency or accident.

Boat capsizes	Prevent:	Load properly. Balance/counterbalance.
	Prepared:	Stay with the boat. Wear a life jacket. Learn to swim. Learn to float or tread water. Remain calm, observe surroundings.
Slips/falls into the swimming pool	Prevent:	A pool is for swimming, not horseplay.
	Prepared:	Reach, throw or row. Dial 911. Learn to swim. Learn to tread water and float.
Slips/falls off the dock	Prevent	Walk on the dock.
	Prepared:	Wear a life jacket. Learn to swim. Learn to float, tread water. Remain calm, be observant.
Falls off a river raft	Prevent:	Go rafting with experts. Use a real raft, not pool toys for rafting.
	Prepared:	Wear a life jacket. Float downstream, feet first.
Not able to climb out of bayou	Prevent:	Obey signs. Swimming in a bayou is not recommended.
Cut feet on broken glass	Prevent:	Look before you leap.
	Prepared:	Call a responsible adult. Dial 911



Suggested Vocabulary and Spelling Expander

Observant	Calm
Downstream	Gust
Sailboat	Emergency



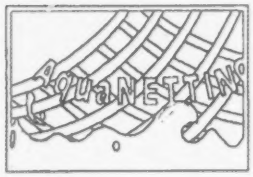
Accidents happen. Boats capsize, even when boaters are careful.

The best strategy is to prevent accidents.

The next best strategy is to be prepared should an accident occur.

It is easier to see a person in the water if the person stays with the boat.

AquaSMART boaters STAY WITH THEIR BOAT WHEN IT CAPSIZES.



First AquaNET: *Children's Literature Selections*

Rand, Gloria, *Salty Sails North*, Henry Holt, N.Y., 1990.
Paulson, Gary, *Hatchet*, Rife, 1988.

AquaCOPY

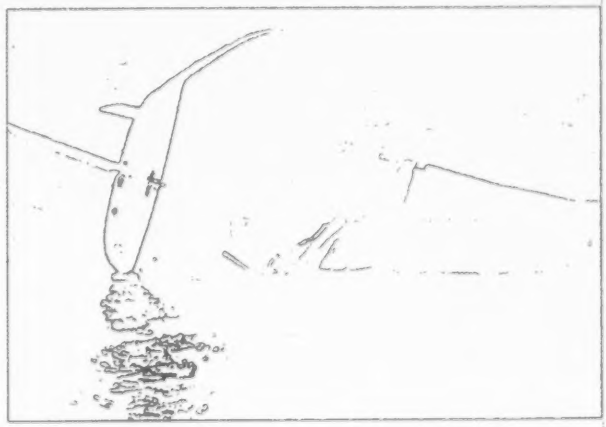
Name:_____ Date: _____

AN UNEXPECTED SPILL

Lauren and Andres decide to go sailing in Lauren's sailboat. Lauren tells her mother that she and Andres are going out in the sailboat and that they expect to be home in about two hours.

The boat is just big enough for the two of them. Before Lauren and Andres get into the sailboat, they put on their life jackets. As they get into the boat, they are careful to sit so that the boat is balanced.

Lauren is a good sailor. The lake is calm but the wind is brisk. Soon she and Andres are far from shore. Suddenly, there is an unexpected gust of wind, and the sailboat capsizes. Lauren and Andres are thrown into the water. What do you think they should do?



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Name:_____ Date: _____

LESSON 7, WORKSHEET 1

SECOND AquaCLUE

STAY WITH YOUR BOAT

_____ The wind is brisk and the boat is in the middle of the lake.

_____ Lauren and Andres are thrown overboard.

_____ Lauren and Andres go down to the dock and put on their life jackets.

_____ A sudden gust of wind blows the boat over.

_____ Lauren tells her mother that she and Andres are going sailing and will be back in two hours.

_____ Lauren and Andres climb into the boat, being careful to keep it balanced.

_____ Lauren and Andres swim back to the boat and stay there until rescued.

INSTRUCTIONS:
Have students number the sentences in correct sequence.

AquaCOPY

Name:_____ Date: _____

LESSON 7, WORKSHEET 2

SECOND AquaCLUE

WATER TIPS

Water Characteristic/Activity	POOL	RIVER	LAKE	OCEAN
Fast current				
Deep water				
High waves				
Undertow				
Can see the bottom				
Rough water				
Big rocks in the water				
Sandy beaches				
Good for sailing				
Good for water skiing				
Good for fishing				
Can be dangerous				

Write some of the water safety rules for each body of water_____

_____

_____

INSTRUCTIONS:
For each activity, write *Sometimes, Always, Never* under the type of water.

AquaCOPY

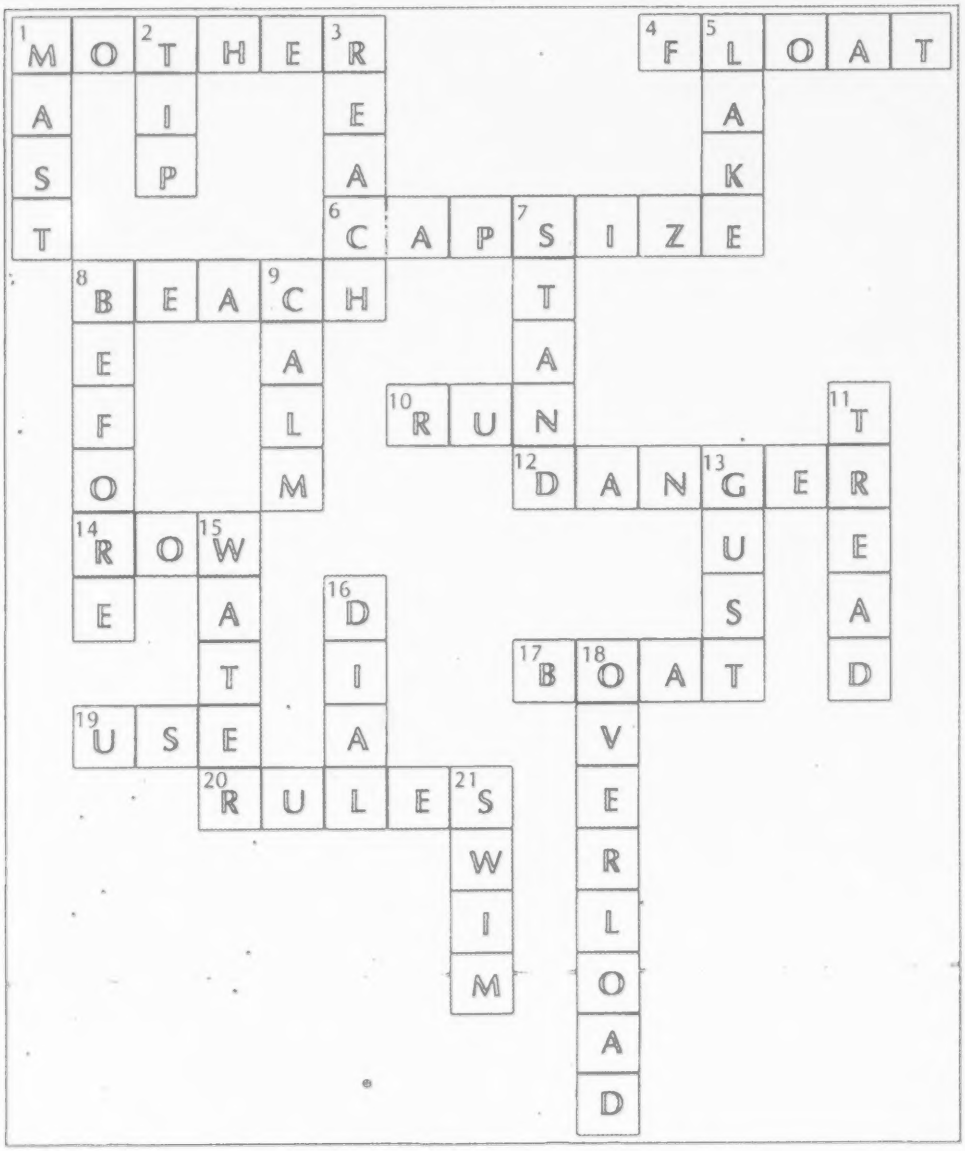
Name: _____ Date: _____

LESSON 7, WORKSHEET 3

THIRD AquaCLUE

CROSSWORD PUZZLE

(SOLUTIONS)



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Name:_____ Date: _____

LESSON 7, WORKSHEET 4

FOURTH AquaCLUE

ANYTHING CAN HAPPEN

Emergency or Accident	*Prevention Rules*	*Preparation Skills*
Boat Capsizes		
Slips/falls in the Swimming Pool		
Runs/Falls off the Dock		
Falls off a River Raft		
Not Able to Climb out of a Canal		
Cut Feet on Broken Glass		

INSTRUCTIONS:
See Fourth AquaCLUE for examples.

AquaLESSON 8

LEARN BOATING RULES OF THE ROAD

☐ **Objective.** It is **AquaSMART** to learn the boating rules of the road.

This **AquaLESSON**:

- teaches that there are rules of the road for boaters,
- teaches that the rules of the road for boat operators are analogous to rules of the road for car drivers,
- advises that the rules must be followed no matter what kind of boat you are in, and
- teaches that the rules make it safer for everyone on the water.

☐ **Summary.** This **AquaLESSON** introduces many boating rules of the road. It reviews some of the rules already presented in earlier lessons, such as wearing a life jacket, and introduces new ones. Some of the rules refer to personal conduct, while others refer to managing the boat on the waterway.

☐ **Storyline.** A coast guard auxiliary member is invited by the teacher to the **AquaSMART** Team's classroom. The purpose of the visit is to introduce the class to the boating rules of the road.

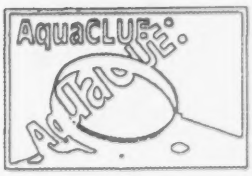
A VISIT FROM THE COAST GUARD

Mrs. Johnson's class was very excited. Today, a member of the U.S. Coast Guard Auxiliary was coming to visit the class to tell the students about the boating rules of the road. The students had been studying some of the safety rules in their class and they were eager to learn more.

The Coast Guard Auxiliary member arrived at 10 a.m. She brought coloring books, games, and posters for the class. She told the students that safety rules applied to boating just as they applied to automobiles, and that the rules made it safer for everyone. She told the students that they must wear a life jacket, a rule the students already knew. She also told them that the students had to be 13 years old or pass an approved boating safety course before they could operate a motor boat. The students knew that rule, too.

*Finally, the Coast Guard Auxiliary member told the students that there were rules that governed the operation of a boat. "In some ways," she said, "driving a boat is like driving a car." The **AquaSMART** Team was surprised because they had never heard anyone say that. They thought all you had to do was step on the gas and steer.*

The Coast Guard Auxiliary member explained some of the rules that the students could learn and watch for while they were out on the water. The rules applied to passing, crossing, and meeting other boats, reading buoys, and listening to weather reports. Can you guess what some of the rules are, and why they are important?



The **AquaCLUEs** help the students learn some of the boating operating rules, and teaches them that the rules apply to all types of water craft. The clues emphasize that there are official sources of information, and that there are signs that they can look for that will give them information. The signs are flags, and horn toots. This lesson can be used to reinforce **AquaLESSON** 5 in which the students were taught to look for signs, interpret them, and decide if the signs gave information or informed them of their responsibility.

First AquaCLUE: *Listing the Rules*

☐ **Materials:** Worksheet 1.

☐ **Time:** 30 minutes plus worksheet

Worksheet 1 contains statements about boat operations in one column, and the rule governing that situation in another. Review the rules with the students.

The rules are:

- Boating rules of the road apply to all boats.
- One short toot means "I'm going right."
- Two short toots mean "I'm going left."
- Five short toots mean "danger."
- When 2 boats meet head on, both go right.
- When boats cross, the boat to the right has the right-of-way.
- Sailboats powered only by the wind have the right-of-way.
- Large ships always have the right of way.
- A buoy is a waterway marker.
- A buoy shows safe water, slow speed zones, and swimming areas.
- A foghorn warns of danger.
- Listen to the weather report.

Then, after the discussion, ask the students to match the rules with the boat operation. The matching sequence is 13, 3, 6, 8, 9, 2, 10, 11, 4, 12, 5, 7, and 1.

Work with the students so that they match the statements correctly, and understand the reasons. For example, sailboats have the right of way because they depend on the wind. They are more difficult to steer than motorboats, and always passing to the right prevents collisions. Also, introduce the idea of courtesy, suggesting that a good boater operates the boat so that it does not interfere with the good time others are having, and does not place anyone else in danger.

Also, weather plays an important role in boating activities. Ask the students how they can obtain information about the weather. Be sure they include radio, television, and newspaper. If they do not mention it, tell the students that the U.S. Coast Guard is an important source of weather information. Draw a parallel between the Coast Guard and the highway patrol, each functioning to guard the safety of the driver. There are special weather notices called "Local Notices to Mariners" that tell about changes in buoys and give other safety information.

Second AquaCLUE: *Applying the Rules*

☐ **Materials:** Worksheet 2.

☐ **Time:** 15 minutes

After the boating rules of the road have been reviewed, distribute Worksheet 2 to the students. The worksheet contains some exercises that help the student visualize the rules for two boats meeting, crossing, and passing each other.

Meeting. The dotted lines for each boat should show the boat passing to the right.

Crossing. The dotted line should show the boat to the right having the right-of-way.

Passing. The dotted line should show the second boat passing to the right or the left.

Third AquaCLUE: *How Many Toots?*

☐ **Materials:** Worksheet 3.

☐ **Time:** 30-45 minutes

Distribute Worksheet 3 to the students. Explain that they should circle the correct number of toots for each action taken by the boat.

When the students have completed the exercise, ask them to discuss the following questions. Older students can complete the worksheet by themselves.

- Why is it important for boats to signal that they want to pass?
- What is the signal for cars that want to pass?
- Why is it important for boats to signal danger?
- What are some dangerous events that could happen?
- Do cars have danger signals? What are they?

Fourth AquaCLUE: *The Word Web*

☐ **Materials:** Worksheet 4.

☐ **Time:** 25 minutes

This **AquaCLUE** reviews many of the boating rules of the road. Distribute Worksheet 4 to the students and ask them to fill in the word web. Ask the students to use the hints below the word web to discover the correct answer. The students should enter the answer in the web cell with the number corresponding to the number of the hint. The following are the correct answers.

Web Cell 1: 13 years old
Web Cell 2: Life jacket
Web Cell 3: Weather forecast
Web Cell 4: Waterway markers
Web Cell 5: Sailboats or large ships
Web Cell 6: All boats
Web Cell 7: Everyone
Web Cell 8: Unobstructed side

Suggested Vocabulary and Spelling Expander

Rectangle	Triangle
Buoy	Waterway
Weather	Forecast
Right-of-way	

Boating accidents occur because boaters do not follow the rules of the road. In Texas:

Most boating accidents involve small boats

Most boating-related deaths occur among boaters riding in open motorboats.

Most boating accidents involve collisions between two boats.

AquaSMART MEANS THAT YOU FOLLOW THE BOATING RULES OF THE ROAD.

First AquaNET: *Children's Literature Selections*

Byars, Betsy, *The Night Swimmers*, Dela Corte Press, N.Y., 1980.
Mackay, Margaret, *Dolphin Boy*, G. P. Putnam's Sons, N.Y., 1963.
Walters, Marguerite, *Small Pond*, E. P. Dutton & Co., Inc., N.Y., 1967.

Boating Rules of the Road

Ask the students to take home Worksheet 3, How Many Toots. Ask them to discuss the operating rules of the road with their family.

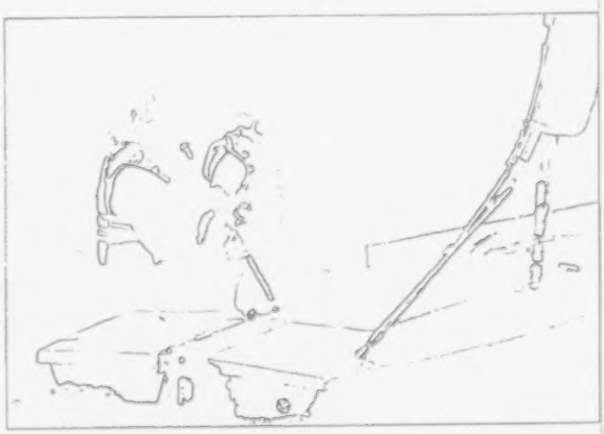
AquaCOPY

Name:_____ Date: _____

A VISIT FROM THE COAST GUARD

Mrs. Johnson's class was very excited. Today, a member of the U.S. Coast Guard Auxiliary was coming to visit the class to tell the students about the boating rules of the road. The students had been studying some of the safety rules in their class and they were eager to learn more.

The Coast Guard Auxiliary member arrived at 10 a.m. She brought coloring books, games, and posters for the class. She told the students that safety rules applied to boating just as they applied to automobiles, and that the rules made it safer for everyone. She told the students that they must wear a life jacket, a rule the students already knew. She also told them that the students had to be 13 years old or pass an approved boating safety course before they could operate a motor boat. The students knew that rule, too.



Finally, the Coast Guard Auxiliary member told the students that there were rules that governed the operation of a boat. "In some ways," she said, "driving a boat is like driving a car." The **AquaSMART** Team was surprised because they had never heard anyone say that. They thought all you had to do was step on the gas and steer.

The Coast Guard Auxiliary member explained some of the rules that the students could learn and watch for while they were out on the water. The rules applied to passing, crossing, and meeting other boats, reading buoys, and listening to weather reports. Can you guess what some of the rules are, and why they are important?

AquaCOPY

Name:_____ Date: _____

LESSON 8, WORKSHEET 1

FIRST AquaCLUE

BOATING RULES OF THE ROAD

1.	Boating rules of the road	_____	Each should go to the right.
2.	Five short toots means	_____	I'm going to the right.
3.	One short toot means	_____	Short toot once.
4.	Two short toots means	_____	When they meet motorboats.
5.	When crossing, the boat to the right	_____	Waterway marker.
6.	If you want to pass on the right	_____	Danger.
7.	If you want to pass on the left	_____	Safe water, slow speed zones, and swimming areas.
8.	Sailboats have the right of way	_____	Warns of danger.
9.	A buoy is a	_____	I'm going to the left.
10.	Buoys show	_____	Listen to the weather report.
11.	A foghorn	_____	Has the right of way.
12.	For safety	_____	Two short toots.
13.	When two boats meet	_____	Apply to all boats.

INSTRUCTIONS:
Match the number with the correct answers. Answers are in the First AquaCLUE.

AquaCOPY

Name:_____ Date: _____

LESSON 8, WORKSHEET 2

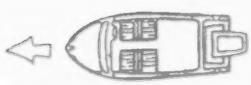
SECOND AquaCLUE

MEETING, CROSSING, AND PASSING

Meeting

Draw dotted lines showing the appropriate direction for each boat.

Crossing



One boat is trying to cross in front of the other. Draw a dotted line showing which boat has the right-of-way.

Passing

One boat wants to pass the other. Draw a dotted line showing the boat passing on the correct side.

INSTRUCTIONS:
Draw dotted lines. Correct maneuvers are contained in the Second **AquaCLUE**.

AquaCOPY

Name:_____ Date: _____

LESSON 8, WORKSHEET 3

THIRD AquaCLUE

HOW MANY TOOTS?

How many toots?

Boat action	*Circle the correct number of toots.*				*Answers*
Danger	1	2	3	4	5 (5 Toots)
Pass to the right	1	2	3	4	5 (1 Toot)
Pass to the left	1	2	3	4	5 (2 Toots)

1. Why is it important for boats to signal that they want to pass? _____

2. What is the signal for cars that want to pass? _____

3. Why is it important for boats to signal danger? _____

4. What are some dangerous events that could happen? _____

5. Do cars have danger signals? What are they? _____

Parent's Signature: _____

INSTRUCTIONS:
Ask students to discuss operating rules with the family. Have parents sign the sheet and return.

AquaCOPY

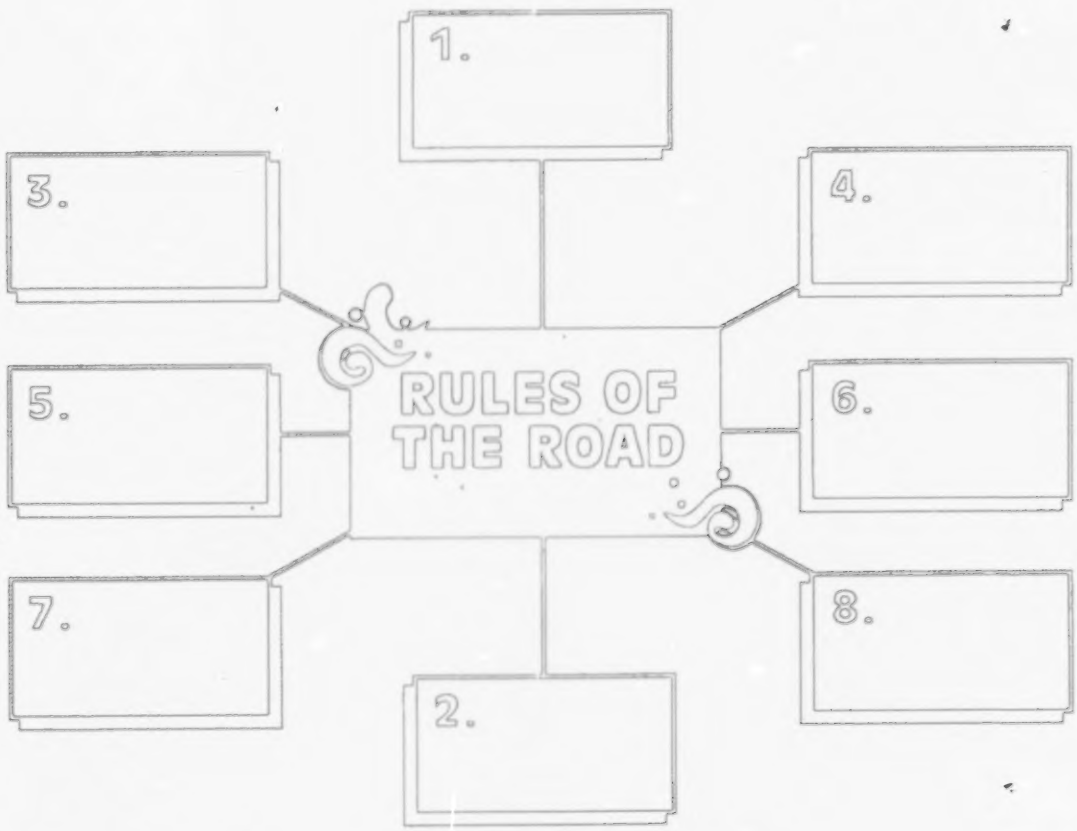
Name: _____ Date: _____

LESSON 8, WORKSHEET 4

FOURTH AquaCLUE

THE WORD WEB

BOATING RULES OF THE ROAD



Hints: _____

1. How old must I be to operate a motor boat?
2. What I must wear when I go riding in a boat.
3. What I should listen to before I go boating.
4. What are buoys?
5. When passing a motor boat, what kind of boat has the right-of-way?
6. To what kinds of boats do the boating rules of the road apply?
7. Who should learn to swim?
8. Always pass to the _____ of another boat.

AquaLESSON 9

ALCOHOL, DRUGS, AND BOATING DON'T MIX

☐ **Objective.** It is **AquaSMART** to NOT drink and drive.

This **AquaLESSON**:

- reminds the students that alcohol, drugs, and boating do not mix,
- teaches that laws about drinking and operating boats are similar to laws about drinking and driving a car,
- reminds the students to always make safe choices when it comes to drinking and boating, and
- reinforces the slogan, "Say no to alcohol and drugs."

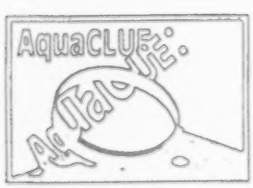
☐ **Summary.** This lesson teaches the students that making the correct choices can help them avoid accidents. The lesson emphasizes that, even at their age, there IS something they can do when it comes to mixing alcohol and operating a boat.

☐ **Storyline.** The **AquaSMART** Team is faced with a situation that could be dangerous for everyone, even though the TEAM is **AquaSMART**, that is, they have learned to swim, are wearing Coast Guard-approved life jackets, and they have learned many of the rules for safe boating. In the story, they are confronted with the problem of drinking and driving. The **AquaSMART** Team must make a choice, even though the correct choice could prevent them from doing something they had been looking forward to for a long time.

THE RIGHT CHOICE

*Lora asks the **AquaSMART** Team members to go out on her older brother's boat for the day. The Team members put on their life jackets, and jump in the car, waiting for Lora's brother to drive them down to the dock. The Team is very excited because the boat has a galley, beds, and an on-board bathroom. Most of the Team members had never been on a boat that big.*

On the way to the lake, Lora's brother and his friends stop to purchase a couple cases of beer at the mini-mart. The Team remembers that it is not safe to drink or use drugs while driving. Do you think the Team could be in danger? If the Team believes they are in danger, what can they do about it?



☐ The **AquaCLUEs** teach the students that, even when they are young, they have to make the right choices. Sometimes those choices are not easy to make because it may mean they must give up something they want or are looking forward to doing. The first **AquaCLUE** shows that, in most situations, choices have to be made and that they may have to trade off one thing for another.

Also, the **AquaCLUEs** help the students understand that they can influence the choices others make. This is an important lesson for the students to discover. **Even though they are not adults, their opinion counts.**

First AquaCLUE: *Pickin' and Choosin'*

☐ **Materials:** Worksheet 1 and 2.

☐ **Time:** 45-60 minutes

Explain that, as they grow older, students must make more and more choices. Making choices is part of the journey to becoming an adult.

Ask the students how many have younger brothers, sisters or cousins. Ask them to talk about the choices they are able to make compared to younger children. Those choices can include such things as:

- The clothes they purchase and wear,
- Friends,
- The route to school,
- The kind of bicycle they want, and
- The books they read.

Explain to them that making the right choice is the goal.

Tell the students that they are going to play the game, Pickin' and Choosin'. The objective of the game is to teach the students that, by making the right choices, the outcome is more pleasing.

Distribute Worksheet 1, and tell the students that they have $50 to spend on their next birthday party. Be sure to emphasize that the $50 must pay for everything they want to include.

Explain that the students are going to plan and shop for the party. Ask them to tell you some of the things they would like to have at their party. Then, distribute the advertisement sections of the Sunday newspaper or department store catalogs to the students. Be sure the materials have items suitable for planning a birthday party for 8 children. Worksheet 2 can be used in place of advertisements.

Ask the students to enter, in the appropriate column, the name of the items they want to purchase for their party on the worksheet, and the cost of the item.

When they have completed the list, ask the students to sum the cost column. Ask how many students spent more than the allotted $50. Help them make choices that will keep them within budget. The choices can include:

- Purchase a cake mix instead of a cake.
- Eliminate some items.
- Substitute lower for higher cost items.

When they have completed the exercise, have the students discuss their choices. Help them understand that life presents many choices, and that good planning includes making the right choices.

☐ **Return to the story.** Ask the students if Lora's older brother and his friends were making the right choice. Ask them what the right choice would have been. Tell the students that it is against the law to be drunk and drive a boat. Be sure to make the connection between the story and the slogan, "It's OK not to drink"; that the group could have had just as good a time without the beer.

Ask the students what were the choices available to the **AquaSMART** Team. Be sure the include:

- Not say anything.
- Ask Lora's brother to choose a designated driver.
- Ask Lora's brother not to drink while operating the boat.
- Decide not to go along.

Ask the students to discuss the choices, and ask them to discuss the consequences of each choice. Be sure to point out that the right choice might mean giving up what they are planning, but that the right choice might avoid an unpleasant situation, such as an arrest, or an accident that could cause an injury.

Second AquaCLUE: *Quick Decisions*

☐ **Materials:** Worksheet 3, paper, and crayons.

☐ **Time:** 30-45 minutes

This **AquaCLUE** reminds students that alcohol and drugs impair judgment and reflexes, that alcohol and drugs make it more difficult to make a decision and, having made a decision, more difficult to act upon it. The **AquaCLUE** emphasizes that the wrong choice can have an unhappy outcome.

Ask the students to divide up in working groups. Ask each group to select a recorder and reporter. Explain to the students that they are to think of boating and swimming situations where they might have to make quick decisions. Distribute Worksheet 3.

Concept: Alcohol and drugs impair judgment and reflexes. Context: (1) Adults, whom they can influence, and (2) the decision they expect to make when they grow up.

Discussion: List situations in which boaters must act quickly. The situations can include: launching and docking, when a water skier is down, when another boat is in trouble, when riding on the wrong side of a buoy, when another boat is on the wrong side of the river, or when the passengers are not seated or not seated correctly, such as bow riding.

Next to each situation, ask the students to write or draw what could happen in each of these situations. Point out that there are times when quick decisions have to be made, and that alcohol and drugs reduce the boaters' ability to make quick, good decisions. Then, have them describe the impact of a good decision (good consequences), bad decision (bad consequences).

When they have completed the task, ask the students if they think the situations are (1) common while boating, (2) have a high potential for occurring, and (3) if quick judgment could prevent an accident.

Third AquaCLUE: *Driving Under the Influence (DUI) Chart*

☐ **Materials:** Worksheet 4.

☐ **Time:** 30 minutes

This **AquaCLUE** teaches the students that alcohol affects everyone differently. The things that make a difference are:

- How much alcohol is consumed.
- How much time has passed since you drank alcohol.
- How much you weigh.

Help the students understand that, when it comes to knowing the affects of alcohol, it is difficult to assess the impact of one or two drinks.

Distribute Worksheet 4 containing the Department of Motor Vehicles DUI Chart.

Explain to the students:

- BAC is your Blood Alcohol Concentration, that is, the amount of alcohol in your blood.
- It is illegal to drive with a BAC of 0.10% or more.
- Borderline BAC levels MAY receive a DUI when other factors are considered.
- A DUI conviction means you can lose your drivers license, be fined or even go to jail.
- Even worse, a person driving under the influence may injure or kill themselves or someone else.

Using the DUI chart:

- Select a weight on the chart.
- Select a number of total alcoholic drinks.
- Select the length of time since the first alcoholic drink was consumed.
- For anyone under 21 years old, having even one drink automatically puts them in the DUI range.

Ask the students to notice:

- It doesn't take many alcoholic drinks to reach the 0.10% BAC.
- The less you weigh, the quicker you reach the 0.10% BAC. THAT IS ONE REASON IT IS SO DANGEROUS FOR YOUNG PEOPLE TO DRINK.
- It takes many hours for the 0.10% BAC to drop.

Discussion questions:

1. For persons weighing less than 129 pounds, how many drinks does it take to reach the 0.10% BAC? (One drink.)

2. If you are less than 21 years old and weigh less than 129 pounds, how many drinks put you at risk of a DUI? (One drink.)

3. If you are less than 21 years old, weigh less than 129 pounds, and have had a total of 2 drinks, how many hours must pass before you are no longer at risk of a DUI? (Four hours.)

Fourth AquaCLUE: *Breaking a Bad Habit*

☐ **Materials:** Worksheet 5.

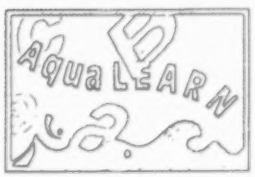
☐ **Time:** 25 minutes plus play time

Suggest that drinking and driving can be a bad habit and that boaters can have just as much fun if they do not drink. As important, the students can influence others to break bad habits. Read the story, "How To Break a Bad Habit" (Worksheet 5) to the students. For older students, the story can be given in play form, with students taking the role of Moderator, Rabbit, and Monkey.

Have the students discuss how bad habits can be broken. Ask, how did the monkey and the rabbit break their bad habits? Write the suggestions on the board. Make sure they include:

1. They identified them.
2. They talked about them.
3. They agreed to stop.

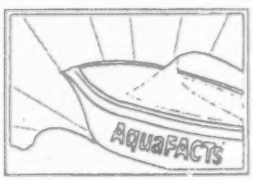
Connect the monkey and rabbit's bad habit with the bad habit of drinking while driving or operating a boat. Ask the students to apply the suggestions on how the monkey and the rabbit break their habit to how the students can interact with older persons to break their bad habit.



It is unlawful to operate a boat while intoxicated with alcohol or drugs.

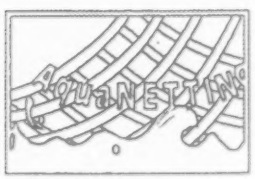
Alcohol and drugs impair judgment and slow reflexes.

AquaSMART BOATERS DO NOT DRINK AND DRIVE.



There is no safe way to drive after drinking.

Even one drink can make you an unsafe driver.



First AquaNET: *Don't Drink and Drive, It's the Law*

☐ **Materials:** Worksheet 6, cardboard, glue.

Reproduce the law contained in Worksheet 6, and distribute the worksheet to the students. Have them cut out the sign, and cut it in half. Using one side, trace the sign on a piece of cardboard. Then, have the students paste the sign, one-half on each side of the cardboard. Ask the students to take the sign home, discuss the law with their family, and ask if they may hang the sign in the kitchen.

Second AquaNET: *Children's Literature Selections*

AVI, *Blue Heron,* Bradbury Press, N.Y., 1992.
Nevin, Evelyn C., *The River Spirit and the Mountain Demons,* D. Van Nostrand Company, Inc. N.Y., 1965.
Rumsey, Marian, *The Seal of Frog Island,* William Morrow and Company, N.Y., 1961.

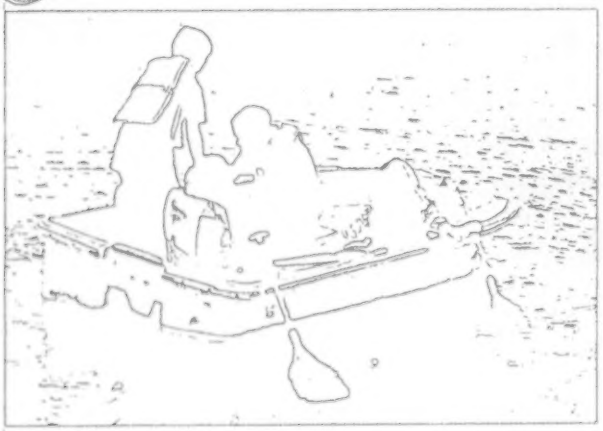
Third AquaNET: *DUI Chart*

Remind the students to take their DUI chart home. Ask them to show their parents how the chart works. Have them ask their parents to experiment with the chart, just as they did in class.

AquaCOPY

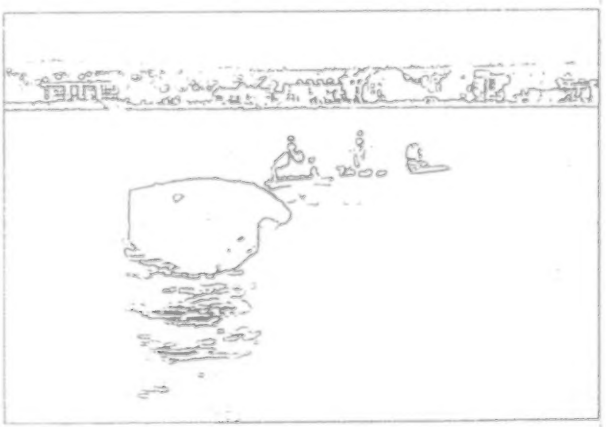
Name:_____ Date: _____

THE RIGHT CHOICE



Lora asks the **AquaSMART** Team members to go out on her older brother's boat for the day. The Team members put on their life jackets, and jump in the car, waiting for Lora's brother to drive them down to the dock. The Team is very excited because the boat has a galley, beds, and an on-board bathroom. Most of the Team members had never been on a boat that big.

On the way to the lake, Lora's brother and his friends stop to purchase a couple cases of beer at the mini-mart. The Team remembers that it is not safe to drink or use drugs while driving. Do you think the Team could be in danger? If the Team believes they are in danger, what can they do about it?



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Name:_____ Date: _____

LESSON 9, WORKSHEET 1

FIRST AquaCLUE

PLANNING A BIRTHDAY PARTY

Item	Where to Purchase	Cost of Item

INSTRUCTIONS:
Using the shopping list in Worksheet 2, have the students decide what they *want to* and *can* purchase for their party.

AquaCOPY

Name: _____ Date: _____

LESSON 9, WORKSHEET 2

FIRST AquaCLUE

BIRTHDAY PARTY SHOPPING LIST

Party Item	Cost
Party Favors	$1.50 ea.
Candy	$2.95 bag of 75
Cake Mix	$1.49
Cake Icing	$1.35
Ice Cream	$2.89
Paper Plates	$2.57
Paper Cups	$2.55
Paper Table Cloth	$3.95
Paper Napkins	$1.29
Party Decorations	$6.50
Balloons (4)	$2.19 ea.
Soda (3 bottles)	$1.89 ea.
Party Invitations (8)	$1.95
Bakery Cake	$15.00
Bakery Cupcakes	$10.00 one dozen
Go to a Movie (8)	$32.00
Order Pizza (2 large)	$16.00
Piñata	$6.00
Magician	$25.00
Skating at Rink (8)	$24.00
Video Rental	$3.00 ea.
Popcorn (Large Bag)	$3.50
Hot Dogs (2 Packages)	$4.00
Buns	$4.00
Sidewalk Chalk	$5.00
Velcro Dart Game	$5.50

AquaCOPY

Name:_____ Date: _____

LESSON 9, WORKSHEET 3

SECOND AquaCLUE

QUICK DECISIONS

Event	Decision	Good Consequences	Bad Consequences

INSTRUCTIONS:
Teaches every decision can have a good or bad outcome. List boating activities, decision, and consequences. See Second AquaCLUE for examples.

AquaCOPY

Name:_____ Date: _____

LESSON 9, WORKSHEET 4

THIRD AquaCLUE

DEPARTMENT OF MOTOR VEHICLES

DRIVING UNDER THE INFLUENCE CHART

BAC Zones: 90 to 109 lbs.		110 to 129 lbs.		130 to 149 lbs.		150 to 169 lbs.	
TIME FROM 1st DRINK	TOTAL DRINKS 1 2 3 4 5 6 7 8	TIME FROM 1st DRINK	TOTAL DRINKS 1 2 3 4 5 6 7 8	TIME FROM 1st DRINK	TOTAL DRINKS 1 2 3 4 5 6 7 8	TIME FROM 1st DRINK	TOTAL DRINKS 1 2 3 4 5 6 7 8
1 hr		1 hr		1 hr		1 hr	
2 hrs		2 hrs		2 hrs		2 hrs	
3 hrs		3 hrs		3 hrs		3 hrs	
4 hrs		4 hrs		4 hrs		4 hrs	

BAC Zones: 170 to 189 lbs.		190 to 209 lbs.		210 lbs. & Up	
TIME FROM 1st DRINK	TOTAL DRINKS 1 2 3 4 5 6 7 8	TIME FROM 1st DRINK	TOTAL DRINKS 1 2 3 4 5 6 7 8	TIME FROM 1st DRINK	TOTAL DRINKS 1 2 3 4 5 6 7 8
1 hr		1 hr		1 hr	
2 hrs		2 hrs		2 hrs	
3 hrs		3 hrs		3 hrs	
4 hrs		4 hrs		4 hrs	

Shadings in the charts above mean:

- ☐ (.01% - .04%) May be DUI – **Definitely DUI if under 21 yrs. old.**
- ☐ (.05% - .10%) Likely DUI – **Definitely DUI if under 21 yrs. old.**
- ☐ (.10% Up) Definitely DUI

Discussion Questions

1. For persons weighing less than 129 pounds, how many drinks does it take to reach the 0.08% BAC?

_____

_____

2. If you are less than 21 years old and weigh less than 129 pounds, how many drinks put you at risk of a DUI?

_____

_____

3. If you are less than 21 years old, weigh less than 129 pounds, and have had a total of 2 drinks, how many hours must pass before you are no longer at risk of a DUI?

_____

_____

INSTRUCTIONS:
Use chart to find answers.

AquaCOPY

Name:_____ Date: _____

LESSON 9, WORKSHEET 5

THIRD AquaCLUE

HOW TO BREAK A BAD HABIT

Monkey and Rabbit sat talking. Rabbit twitched his nose. Monkey scratched his back. Rabbit twitched his ear. Monkey scratched his leg. Rabbit twitched his other ear. Monkey scratched his head.

"Would you STOP that TWITCHING," said Monkey.
"What a bad HABIT that is."

"Bad HABIT?" said Rabbit.
"Talk about bad HABITS...Look at YOU.
Scratch...scratch...scratch...
Now that *is* a bad habit."

"Well *I* could easily STOP if I wanted to," said Monkey.
"So could *I*!" said Rabbit.

"We'll SEE!" said Monkey.

"Let's have a contest. The first person to scratch or twitch LOSES.
Begin...when...I...say...GO!"

"ALL RIGHT!"
Rabbit sat very still. Monkey sat very still.

No one could scratch. No one could twitch. It was very hard to sit so still.

"Let's tell stories," said Rabbit.
"I'll tell you what happened yesterday."

And Rabbit began to talk.

"Yesterday I walked by the marsh. And mosquitoes came after me.
One bit me *here*." (Rabbit twitched his nose to show where he was bitten.)
"One bit me *here*." (Rabbit twitched his ear.)
"Another bit me *here*." (Rabbit twitched his other ear.)
"And here...and here...and here..." (Rabbit was twitching like crazy.)

"Wait! Wait! *I'll* tell a story!" called Monkey.
"Yesterday *I* was walking in town. And a little boy threw rocks at me.
He hit me *here*." (Monkey scratched his back.)
"He hit me *here*." (Monkey scratched his leg.)
"He hit me *here*." (Monkey scratched his head.)
"And here...and here...and here..." (Monkey was scratching all over.)

"I give up!" said Rabbit.

"Me too!" said Monkey.

Rabbit and Monkey began to laugh. They laughed and laughed.

"After all," they said
"It's very HARD to BREAK A BAD HABIT."

Reprinted from "Twenty Tellable Tales," Margaret Read MacDonald, H.W. Wilson (1989)

AquaCOPY

Name:_____ Date: _____

LESSON 9, WORKSHEET 6

FOURTH AquaNET

ALCOHOL & DRUGS

It shall be unlawful for any person to operate any watercraft, vessel, one or more skis, an aquaplane or similar device, upon the waters of this State while such person is intoxicated. (First offense could be punishable, upon conviction, by a fine not to exceed $2,000, confinement in jail not to exceed 180 days or both; second offense a fine not to exceed $4,000, confinement not to exceed one year or both; third offense a fine not to exceed $10,000, imprisonment for not more than 10 years or less than 2 years.) 1996 fines.

TEXAS PARKS & WILDLIFE

ALCOHOL & DRUGS DON'T MIX WITH BOAT OPERATION

INSTRUCTIONS:
Paste on cardboard. Ask students to take home and put on the refrigerator door.

AquaLESSON 10

BE POLITE, DON'T POLLUTE

☐ **Objective.** Conservation and preservation of water and the waterways is **AquaSMART**.

This **AquaLESSON**:

- reminds the students that every living thing needs water,
- teaches students to be aware of the amount of water they use,
- introduces students to the consequences of safe and unsafe disposal of waste, and
- helps students understand the consequences of unsafe disposal of waste for the environment and all living creatures.

☐ **Summary.** The lesson emphasizes the value of a clean environment and sensitizes the students to the effects of their behavior on water, and the people, plants, and animals who depend on the water. They are taught to preserve and conserve water.

☐ **Storyline.** The **AquaSMART** Team learns that even the smallest act can have a profound impact on the environment. While on a fishing trip with Ulysses' father, the Team throws garbage overboard, a simple act that can have an impact on many others sharing the water.

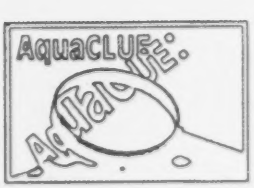
HOOK, LINE, AND SINKER!

*Ulysses and some of the **AquaSMART** Team members are fishing with Ulysses' father. They are having a good time fishing and boating on the Bay. All of a sudden, Ulysses feels a tug on his line, and quickly pulls up on the pole. His father helps him land a four pound rock cod. Ulysses is very happy and proud.*

Ulysses takes the fish off the hook, puts on new bait, and throws the line back into the water, hoping to catch another fish. In his excitement, he becomes careless, and his line becomes tangled with Maria's line. They both struggle, and finally get the tangled mess into the boat. Ulysses cuts the line, and throws the line and the lead sinker into the water.

*After the Team catches a few more fish, they decide to stop and eat the picnic lunch that Ulysses and his father packed for the **AquaSMART** Team. They have sandwiches, cans of soda, punch, and cookies wrapped in foil. Ulysses and his father remembered to bring along styrofoam cups, and plastic spoons and forks.*

When everyone is finished eating, Ulysses gathers all the trash into a plastic bag, and throws the bag into the water. Do you think that Ulysses has done the right thing? What effect will Ulysses' efforts have on the environment?



The **AquaCLUEs** introduce the students to the impact of their behavior on the quality of water, and on the people and animals that need water to live. The **AquaCLUEs** teach that there are proper places for the disposal of waste. Proper waste disposal through recycling can be a part of the larger effort to keep the environment clean.

First AquaCLUE: *Identify the Problem*

☐ **Materials:** Worksheet 1, fishing line, lead sinkers, aluminum soft drink cans and foil, styrofoam cups, six-pack holder rings, and rubberbands.

☐ **Time:** 45 minutes

Brainstorm with the students about Ulysses' actions. Have them identify the things that he threw overboard that could harm the creatures living in the water.

The following should be identified by the students. Have examples of each available for the lesson. Let the students touch and feel each item as they discuss it. Help the students learn the facts about each object they identify.

1. Fishing Line. Fishing line is monofilament, a plastic material that takes a long time before it disintegrates. It is possible for fish, birds, and even swimmers to get tangled in the line and drown or strangle. Fishing line can be a nuisance, also. It can become tangled with other fishermen's lines, or in the boat's propeller. Pass an example of the fishing line among the students. Have them test the line to see how strong it is. There is no substitute for this material so use carefully and don't throw tangled line in the water.

2. Lead Sinkers. Lead sinkers are poisonous to plants, animals, and people. An accumulation of lead in the sea life can lead to death, or weak and malformed bird eggs. Pass a lead sinker around for the students to observe. Help them notice how heavy it is for its small size.. Let them compare the weight with a similar size item, such as an eraser. Have them think about what it would feel like to have a lead sinker lying in your stomach. Use sinkers made of other materials.

3. Aluminum Soft Drink Cans and Foil. Wildlife can get caught in the cans' opening. Cans can be washed ashore, destroying the natural beauty of the environment for both wildlife and humans, alike. Animals may attempt to eat the foil, strangling themselves. Bring large, preferably reusable containers.

4. Styrofoam Cups. Styrofoam and other plastics are very dangerous to the environment. Not only does it take a long time for them to disintegrate, but wildlife frequently mistake styrofoam for food. Since plastic is not digestible, wildlife can be severely harmed by this material. Similar to soft drink cans, styrofoam cups can wash to the shore, destroying the natural beauty of the environment. Demonstrate how a styrofoam cup can crumble into small pieces, and remind them that while the pieces are small, they do not disintegrate. Bring reusable cups.

5. Food Scraps. Food scraps not eaten by wildlife rots in the water, encouraging the formation of algae that interferes with the ecology of the region. The food ingested by the wildlife may not be appropriate to their diet, causing illness, injury, and death. Wildlife are not pets, and unless their proper diet is provided, should not be fed. Take scraps home, put in the compost pile if your family has one.

6. Six-Pack Holder Rings. Fish, birds, and even seals get these rings hooked onto their beaks, noses, fins, and throats. Often, these rings become a necklace that the wildlife cannot get off. If the animal is young, growth will eventually cause the rings to lead to the animal's death. Using the instructions on Worksheet 10, demonstrate the Dangerous Necklace. Don't take on fishing, hiking or outdoor trips.

Return to the story. Have the students consider other actions that could have resulted in more pleasing and appropriate outcomes. Have them think of each item, and record them.

Second AquaCLUE: *Be Polite, Don't Pollute*

☐ **Materials:** Worksheet 2.

☐ **Time:** 30 minutes

Distribute Worksheet 2 to the students, and ask them to fill in the columns.

In Column 1, the students should enter the items that Ulysses threw away. Ask the students to think back to the story, and write down all the things that Ulysses threw overboard.

In Column 2, the students should enter the harm that could come from Ulysses' behavior. Their entries should include sickness and death to wildlife, destruction of their habitat, and polluted water, unsuitable for animals and humans to use.

In Column 3, the students should think of alternative action. For instance, the aluminum cans could be recycled, the food composted, the fishing line and sinkers reused, and so on. At the very least, the students should mention that the waste should be returned to the bag or cooler and taken home for disposal.

In Column 4, the students should enter the benefits of the alternative actions. These entries should include saving wildlife, making the earth a better place to live, and preserving water.

Third AquaCLUE: *Don't Teach Your Trash to Swim*

☐ **Materials:** Poster paper, crayons, marker pens, pictures from magazines.

☐ **Time:** 45 minutes

Explain that the class project is to give the message, "Don't Teach Your Trash to Swim" to the other students in the school. The message will be delivered in the form of a poster. The students can participate in groups or singularly. The poster can include one of the following or other suitable topics:

- The slogan, Don't Teach Your Trash to Swim, or an appropriate slogan developed by the student.

- A collage of human, animal, and plant life that can be harmed by careless behavior.
- A view of the world if students do not stop polluting.
- A collage of items that can harm the water and surrounding water life.
- A view of an unpolluted world.

When the students have completed their posters, have them display them in the class and ask each student to make an oral presentation of their project.

Ask the school administration to display the posters in a prominent location. If no space is available, invite another class to visit your classroom, and have the students make their presentations to the other class.

Fourth AquaCLUE: *Texas Is Not a Dumping Ground*

☐ **Materials:** Worksheet 3.

☐ **Time:** 15 minutes

The objective is to help the students understand that the environment is not a dump; that there are appropriate places for the disposal of waste. Worksheet 3 is a matching exercise that reinforces the idea of the proper disposal for waste products.

Distribute Worksheet 3. Ask the students to identify the waste disposal sites. They are:

a. Landfills
b. Recycling plants
c. Solid waste disposal plants
d. Biomass waste to energy plants
e. Petroleum recycling
f. Scrap metal collectors
g. Compost piles

The letters should be: b, g (can be a community compost pile), c, d (can be located at the landfill), e, g, b, b, f, a, f.

Once each disposal site has been discussed, ask the students to enter the letter for the appropriate waste disposal site next to the item of waste. Have them notice that each item has a proper disposal site. Also, have them notice that if all waste items were properly recycled, there would be very few things left for disposal in the landfill, and none for disposal in the lakes, oceans, rivers, and bays.

AquaCLUE BONUS

☐ **Materials:** Worksheet 4, 5, scissors, paste, cardboard.

☐ **Time:** 25 minutes

The **AquaCLUE** bonus, contained in Worksheet 4, is a game that the students can make and play. The students should be reminded that if we conserve water, and preserve its quality, that water will continue to be available for picnicking, boating, swimming, camping, and fishing.

Duplicate as many copies of Worksheet 4 as the class needs. Because the game board is small, it might be easier for the students to work in pairs, two to a game.

The game board can be made by pasting the first worksheet in the four series to a piece of cardboard. The spinner may be made and assembled using the instructions on the second page of the worksheet.

Instruct the students to cut out the game circle on the dotted lines and paste onto a piece of cardboard. Cut out the game cards. Then give each pair of students a copy of **AquaFACTs** to use while playing the game.

☐ **The Play**

Give each student a button marker. Instruct them to place their marker on the first square marked "Start". Then, let each student take a turn spinning the spinner. The highest number of each pair goes first.

1. Each student takes a turn with the spinner, and moves the number of spaces indicated.
2. The student should take a game card from the stack of cards that has been placed, face down, on the board.
3. The student should read the game card and follow the instructions. If the students do not understand why they are being rewarded or penalized, they are to refer to the **AquaFACT** sheet for information.
4. To win the game, the student must spin or draw the exact number of spaces left to reach Finish. The first student who reaches the finish line, wins the game.

☐ **Alternative Play**

☐ **Materials:** Worksheet 6, markers, cardboard, and numbers 1-27.

☐ **Time:** 20 minutes

Using Worksheet 6 as a guide, have the students make a Bingo card. Have them scramble numbers 1-27 and write 25 of the 27 numbers in the Bingo card spaces.

Select a "caller" and play Bingo. Winner is across, diagonal or down.

Winner reads winning numbers and the **AquaFACT** for each winning number. **AquaFACTs** are on Worksheet 5.

Vocabulary and Spelling Expander

Conserve	Preserve
Recycle	Disposal
Landfill	Biomass
Compost	

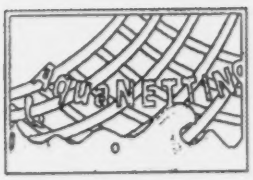
Federal law prohibits dumping plastic trash in navigable waters of the United States or garbage in recreation waters.

Trash dumped into lakes, rivers, and oceans usually does more damage than trash dumped on land.

Plastic bottles, bags, and sheeting dumped from vessels have been found as far away as Antarctica.

Other trash disposed of in water includes oil and batteries from boats, cars, and trucks.

BE AquaSMART, BE POLITE, DON'T POLLUTE



First AquaNET: *Children's Literature Selection*

Graham, Frank Jr. and Ada, *Wildlife Rescue*, Cowles Book Company, Inc., N.Y., 1970.
White, Sandra Verrill and Michael Filisky, Sterling, *The Rescue of a Baby Harbor Seal*, Crown Publishers, Inc., N.Y., 1989.
Shannon, Terry, *About the Land The Rain And Us*, Melmont Publishers, Inc., Chicago, IL, 1963. (An Easy to Read Book.)
Cherry, Lynne, *A River Ran Wild*, Harcourt, Brace & Co., N.Y., 1992.
The Earthquake Group, *50 Simple Things Kids Can Do To Save The Earth*, Andrews and McMeel - A Universal Press Syndicate Company, Kansas City, 1990.
Miles, Betty, *Save the Earth*, Alfred A. Knopfe, N.Y., 1991.
Children of the World, *Rescue Mission*, Planet Earth in Association with the United Nations, Kingfisher Books, 1994.
Kreusky, Stephen, *Children of the Wind and Water*, Scholastic, N.Y., 1994.
Goldman, Linda, *Cleaning Up Our Water*, Children's Press, 1994.
Lucas, Eileen, *Water: A Resource in Crisis*, Children's Press, 1994.
Tokuda, Wendy and Richard Hall, *Humphrey, The Lost Whale*, Heian Int., Inc., 1986.

Second AquaNET: *Don't Pollute, It's The Law*

☐ **Materials:** Worksheet 7.

Reproduce the information shown on Worksheet 7, and send it home with the students.

Third AquaNET: *Texas Is Not A Dumping Ground*

Remind the students to take Worksheet 3 home and share it with their family.

AquaCOPY

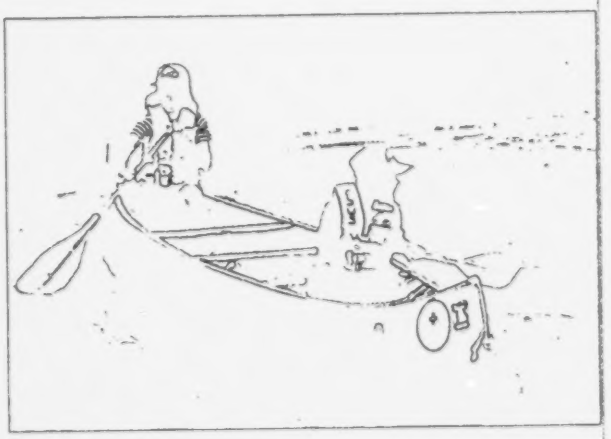
Name:_____ Date: _____

HOOK, LINE, AND SINKER!

Ulysses and some of the **AquaSMART** Team members are fishing with Ulysses' father. They are having a good time fishing and boating on the Bay. All of a sudden, Ulysses feels a tug on his line, and quickly pulls up on the pole. His father helps him land a four pound rock cod. Ulysses is very happy and proud.

Ulysses takes the fish off the hook, puts on new bait, and throws the line back into the water, hoping to catch another fish. In his excitement, he becomes careless, and his line becomes tangled with Maria's line. They both struggle, and finally get the tangled mess into the boat. Ulysses cuts the line, and throws the line and the lead sinker into the water.

After the Team catches a few more fish, they decide to stop and eat the picnic lunch that Ulysses and his father packed for the **AquaSMART** Team. They have sandwiches, cans of soda, punch, and cookies wrapped in foil. Ulysses and his father remembered to bring along styrofoam cups, and plastic spoons and forks.



When everyone is finished eating, Ulysses gathers all the trash into a plastic bag, and throws the bag into the water. Do you think that Ulysses has done the right thing? What effect will Ulysses' efforts have on the environment?

AquaCOPY

Name:_____ Date: _____

LESSON 10 - WORKSHEET 1

FIRST AquaCLUE

THE DANGEROUS NECKLACE

Directions: Teacher is to assist children in this demonstration of how a plastic six-pack can holder can be harmful to a fish.

☐ Distribute a rubber band to each student.

☐ Ask students to hold their left hand up in front of their face with the back of their hand facing them.

☐ Have students use their right hand to hook the rubber band over the "baby" finger of their left hand and stretch it over the thumb of their left hand.

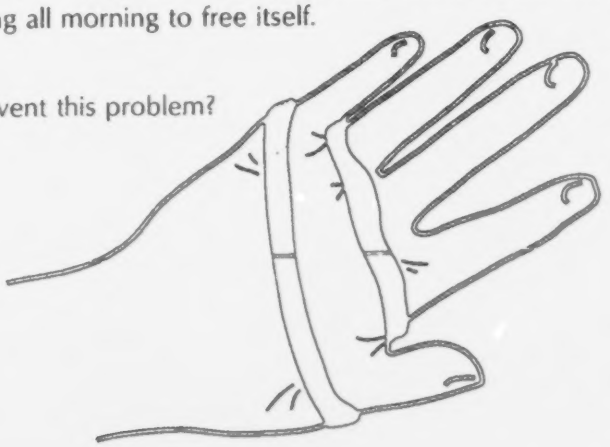
☐ The rubber band should be taut and resting across the knuckles of the left hand.

☐ Have students place their right hand on the bottom of their left elbow.

☐ Now ask students to imaging that they are a fish that has the plastic ring of a six-pack holder around its head. Have students try to free themselves from the rubber band following this rule: Students cannot use their hands, teeth, face or other body parts to help them.

☐ One or two students may free themselves in 10 to 20 seconds, but most will have difficulty. Discuss how a fish might feel after struggling all morning to free itself.

☐ Ask children – What can we do to prevent this problem?



Source: *California State Environmental Guide.*

AquaCOPY

Name: _____ Date: _____

LESSON 10, WORKSHEET 2

SECOND AquaCLUE

BE POLITE, DON'T POLLUTE

Ulysses Threw Away	Harm Caused by Ulysses' Behavior	Alternative Action	Benefits From Alternative Action

INSTRUCTIONS:
See Second AquaCLUE for examples.

AquaCOPY

Name: _____ Date: _____

LESSON 10, WORKSHEET 3

THIRD AquaCLUE

WASTE DISPOSAL

Disposal Site	Waste
A. Landfill	____ Newspapers and Magazines
B. Community Recycling Plant	____ Grass Clippings
C. Solid Waste Disposal	____ Waste Water Tanks from Boats And RVs
D. Biomass Waste-To-Energy	____ Scrap Lumber, Tree Trimmings
E. Petroleum Recycling	____ Oil Drained from Automobiles and Boats
F. Scrap Metal Collector	____ Food Scraps
G. Compost Pile	____ Aluminum Cans
	____ Glass and Plastic Bottles
	____ Broken and Unusable Items Made of Steel, Iron, Copper, or Bronze
	____ Household Garbage not Recycled
	____ Broken Lead Sinkers

INSTRUCTIONS:
Match letters with correct type of waste. Have students take worksheet home to share with their family.

AquaCOPY

Name:_____ Date: _____

LESSON 10, WORKSHEET 4

BONUS AquaCLUE

(1)
YOU WALK BEHIND A FISHERMAN CASTING HIS LINE.
GO BACK 2 SPACES.

(2)
FROM THE DOCK YOU JUMP INTO YOUR INNERTUBE.
MOVE BACK 3 SPACES.

(3)
YOU WALK WHERE A SIGN SAYS NO TRESPASSING.
GO BACK 3 SPACES.

(4)
YOU ARE WEARING YOUR LIFE JACKET. CONGRATULATIONS!
GO AHEAD 5 SPACES.

(5)
YOU SWIM WHERE A SIGN SAYS NO SWIMMING.
GO BACK 4 SPACES.

(6)
YOU TAKE OFF YOUR LIFE JACKET BECAUSE IT'S TOO HOT.
GO BACK 5 SPACES

(7)
YOU STAY CLEAR OF MUDDY WATER WHEN BAREFOOT.
GO AHEAD 4 SPACES.

(8)
YOU WALK KEEPING AWAY FROM THE EDGE OF THE RIVER BANK.
GO AHEAD 2 SPACES.

(9)
YOU BRING A FRIEND ON YOUR WALK BY THE RIVER.
GO AHEAD 2 SPACES.

(10)
YOU WALKED WIDE AROUND A FISHERMAN CASTING HIS LINE.
GO AHEAD 2 SPACES.

(11)
YOU SWIM NEAR WATER SKIERS.
GO BACK 4 SPACES.

(12)
YOU SWIM NEAR WHERE THERE ARE BOATS.
GO BACK 2 SPACES.

(13)
YOU SWIM IN A SWIMMING AREA WITH A LIFEGUARD.
GO AHEAD 2 SPACES.

(14)
YOU WALK ALONE BY THE SIDE OF THE RIVER.
GO BACK 2 SPACES.

(15)
YOU RESCUE A PERSON WHO IS SERIOUSLY HURT JUMPING FROM THE BRIDGE.
GO AHEAD 5 SPACES.

(16)
WHEN SWIMMING, YOU STAY AWAY FROM A FAST CURRENT.
GO AHEAD 3 SPACES.

INSTRUCTIONS: Paste sheet on cardboard, cut out as individual cards.

(17)
YOU WALK IN THE SWIFTLY
MOVING RIVER.
GO BACK 3 SPACES.

(18)
YOU GO OUT ON THE RIVER
ON AN AIR MATTRESS.
GO BACK 4 SPACES.

(19)
FROM THE DOCK YOU CLIMB
DOWN TO THE WATER AND GET
INTO YOUR INNERTUBE.
GO AHEAD 3 SPACES.

(20)
YOU THROW A BUOYANT CUSHION
WITH A ROPE TO A BOY WHO
HAS GONE INTO DEEP WATER.
GO AHEAD 3 SPACES.

(21)
YOU LOCATE THE PHONE AT
THE CAMPGROUND.
GO AHEAD 1 SPACE.

(22)
YOU WALK BAREFOOT INTO
MUDDY WATER.
GO BACK 3 SPACES.

(23)
YOU DON'T KNOW WHERE THE
CLOSEST PHONE IS.
GO BACK 1 SPACE.

(24)
YOU GO OUT ON THE RIVER ON
A PROPER RAFT WITH AN ADULT
WHO HAS EXPERIENCE.
GO AHEAD 4 SPACES.

(25)
YOU WALK TOO CLOSE TO THE
RIVER BANK.
GO BACK 2 SPACES.

(26)
YOU CARRY A LONG STICK WHILE
WALKING ALONG THE RIVER.
GO AHEAD 1 SPACE.

(27)
YOU'RE IN A FAST CURRENT!
YOU FLOAT DOWNSTREAM
WITH YOUR FEET FIRST.
GO AHEAD 5 SPACES.

AquaCOPY

Name:_____ Date: _____

LESSON 10, WORKSHEET 5

BONUS AquaCLUE

AquaFACTS

1. You walk behind a fisherman casting his line and you may get injured with a fish hook. Stay clear.

2. From the dock you jump into your innertube. You may get hurt by the valve stem; that is the piece where you put in the air. Also, you may not know what is under the innertube. Perhaps someone is swimming underwater.

3. You walk where a sign says No Trespassing. You don't know why the owner of the property put up the sign. It may be for your safety or to protect his property.

4. You're wearing your life jacket. Congratulations! The most important thing of all to be safe near the river. If you get caught in swift current or get a cramp swimming, it will keep you afloat and can save your life.

5. You swim where a sign says No Swimming. Usually, this is a dangerous place to swim. Just because you can't see the danger doesn't mean it isn't there.

6. You take off your life jacket because it's too hot. This is a bad thing to do. The life jacket can't save your life if it's on shore or in the bottom of the boat.

7. You stay clear of muddy water when you're barefooted. Good! What if there's a broken bottle under the water and you can't see it?

8. You walk keeping away from the edge of the river bank. This is an especially good thing to do if the bank is above the water. It's muddy there and very easy to slip in and very difficult to get back up. Also, the bank often caves in easily.

9. You bring a friend on your walk by the river. It's a safe thing to do. If anything happens and you fall in the water, your friend can rescue you or go for help.

10. You walked wide around a fisherman casting his line. You won't get injured by a fish hook.

11. You swim near water skiers. If they don't see you, they may run over you or drag their rope over you. Keep far away.

12. You swim near where there are boats. People in the water are very difficult to see. In addition to harm from the boat itself, the boat's propellers are very dangerous.

AquaFACTS (continued)

13. You swim in a swimming area with a lifeguard. This is the safest of all places, especially if you are there with a responsible adult.

14. You walk alone by the side of the river. If anything happens, like slipping and falling in, there is no one there to help you.

15. You rescue a person who is seriously hurt jumping from the bridge. It is very, very dangerous to jump from a bridge regardless of what you have underneath to catch you. People are killed every year this way.

16. When swimming, you stay away from the fast current. Good! It is easy to drift into a dangerous current and suddenly you can't swim against it.

17. You walk in the river. The bottoms of most rivers are full of very slippery rocks and drop-offs. If you slip, the current may push you into the really fast and dangerous part. Stay out of swift moving rivers.

18. You go out on the river with an air mattress. This is OK if you are in a protected swimming area; otherwise, never go into a fast current with swimming pool equipment. It requires a sturdy raft and a lot of strength and experience to handle it.

19. From the dock, you climb down and get into your innertube. Always enter your tube carefully with the valve stem pointing down.

20. You throw a buoyant cushion to a boy who has gone into deep water. If you are in a boat or canoe, keep a buoyant cushion and some small rope on board.

21. You locate the phone at the campground. Good! Anytime you are visiting a place that has dangers, always know where the telephone is *and* know how to dial 911.

22. You walk barefooted into muddy water. What if you stepped on a broken bottle or rusty metal!

23. You don't know where the closest phone is. What if there was an emergency and you couldn't call for help?

24. You go out on the river in a proper raft with an adult who has experience. This is the only way children should go rafting.

25. You walk too close to the river bank. It's muddy and you might slip in. Also, the bank might cave in, dumping you into the water. Either way, it's very difficult to get out.

26. You carry a long stick while walking near the river. If you or your friend falls in, you can reach with the stick for help. Also, the walking stick can help you keep your footing.

27. You're in a fast current. You float downstream with your feet first. This is the proper way to float in a fast-moving stream.

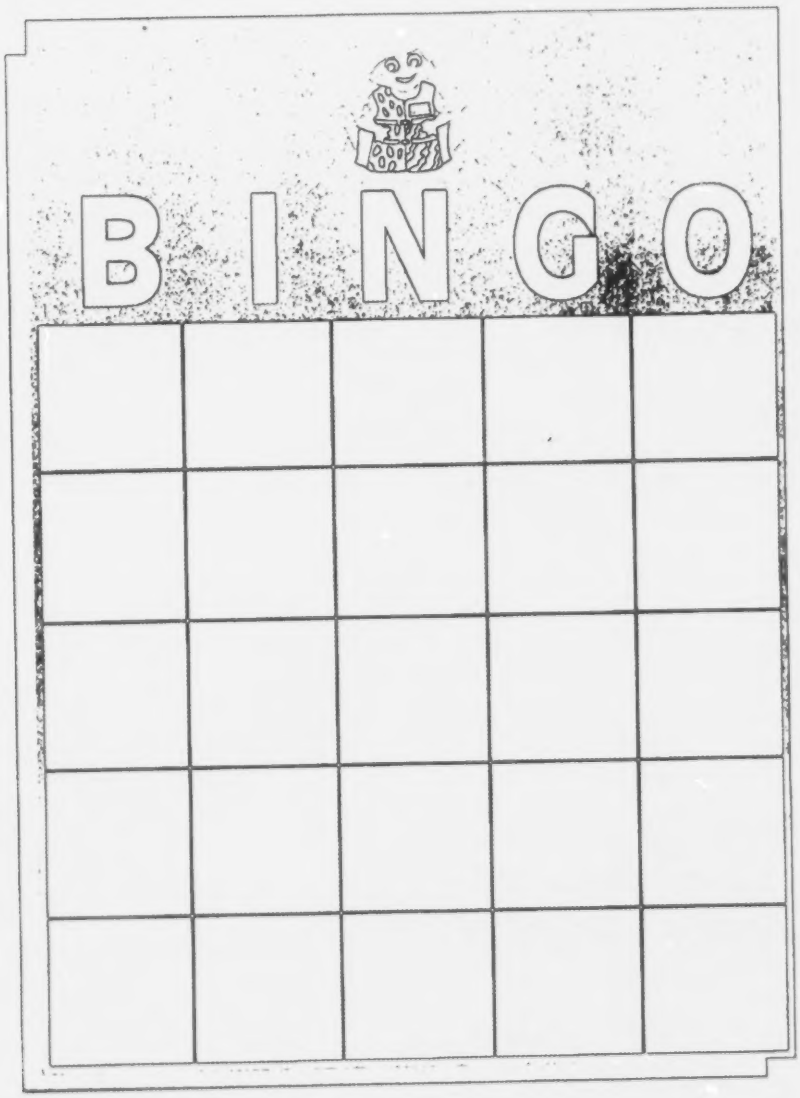
AquaCOPY

Name: _____ Date: _____

LESSON 10, WORKSHEET 6

BONUS AquaCLUE

BINGO CARD



INSTRUCTIONS:
Have students make a 25-space Bingo Card. Have them randomly assign a number to each space.
Play Bingo with 27 numbers.
Winner – across, diagonal or down reads the number and AquaFACT from Worksheet 5 to the class.

AquaCOPY

Name:_____ Date: _____

LESSON 10, WORKSHEET 7

SECOND AquaNET

MARPOL ANNEX V

The International Treaty to Prevent Pollution from Ships (MARPOL) was created to address the plastic pollution problem. It prohibits the dumping of any plastic into the water anywhere, and restricts the dumping of other forms of garbage within specified distances from shore. Violators of any of the regulations issued to implement Annex V are liable for a civil penalty of up to $25,000 for each violation and criminal penalties of up to $50,000.

INSTRUCTIONS:
Have students take home Worksheet 7 to their parents.

AquaCOPY

Name: _____ Date: _____

TEACHER EVALUATION FORM

AquaSMART

Please complete this evaluation form and return to the Texas Parks and Wildlife Department. Your cooperation will ensure continued funding and help us improve our school curriculum program.

Rate the following items on a scale of 1 to 7, with 7 representing the highest rating, and 1, the lowest. Circle the number that best represents your opinion. Space has been provided for you to add your class-specific comments.

1. Curriculum Format

a. Instructions are clear and easy to follow.	1	2	3	4	5	6	7
b. Photo-copied activity sheets are a good idea.	1	2	3	4	5	6	7
c. The suggestions for integrated studies is helpful.	1	2	3	4	5	6	7
d. The written curriculum is a good supplement to the video.	1	2	3	4	5	6	7
e. The written curriculum is a good stand-alone resource.	1	2	3	4	5	6	7

Comments: _____

_____

_____

_____

2. Curriculum Content

a. The content was appropriate for my class.	1	2	3	4	5	6	7
b. It was easy for me to select AquaFACTs appropriate for my class.	1	2	3	4	5	6	7
c. The activities reinforced the lessons.	1	2	3	4	5	6	7
d. The expanded spelling and vocabulary were a good addition to the curriculum content.	1	2	3	4	5	6	7
e. The literature selections are an important component of the content.	1	2	3	4	5	6	7
f. The parent involvement activities were used on a regular basis.	1	2	3	4	5	6	7

Comments: _____

_____

_____

_____

3. Creativity

a. The theme of the curriculum is pleasing.	1	2	3	4	5	6	7
b. The illustrations are appropriate to the content.	1	2	3	4	5	6	7
c. The graphics enhance the presentation of the curriculum.	1	2	3	4	5	6	7
d. The pictures of the AquaSMART experts help coordinate the written curriculum and the video.	1	2	3	4	5	6	7

Comments:_____

_____

_____

_____

4. Student Acceptance

a. Students were able to complete the activities.	1	2	3	4	5	6	7
b. Students participated in the discussions.	1	2	3	4	5	6	7
c. Students responded favorably about the theme, and Splasher.	1	2	3	4	5	6	7
d. Students have seen the video and are able to connect the video with the written curriculum.	1	2	3	4	5	6	7

Comments:_____

_____

_____

_____

Return to:

TEXAS PARKS AND WILDLIFE
EDUCATION BRANCH
4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744

AquaCOPY

Name:_____ Date: _____

STUDENT EVALUATION FORM

AquaSMART

Have students complete the form and return to the Department of Boating and Waterways.

✓ Circle your grade. 3 4 5

✓ Did you like the stories? YES NO

✓ My favorite story: _____

✓ Did you like Splasher? YES NO

✓ Did you like the activities? YES NO

✓ My favorite activity was: _____

_____

_____

✓ Would you like your friends to study these lessons? YES NO

✓ Now that you are AquaSMART, do you think you will be safer when near or in the water?

YES NO

✓ Write down 3 things you learned from the lessons.

_____

_____

_____

INSTRUCTIONS:
Mail with teacher evaluation.

TEXAS PARKS & WILDLIFE

Certificate of Accomplishment

Awarded To:

_____

For Successfully Completing

Aquatic SMART

Presented by Texas Parks and Wildlife

Andrew Sansom

Executive Director

_____

Date

AquaCOPY

Name:_____ Date: _____

A BAD DREAM

Kristin joined the **AquaSMART** Team at school. She had been taking swimming lessons and her teacher thought that Kristin was ready to participate in water sports with other students her age. Tomorrow was the first day that she would meet her teammates, and begin to practice for the swim meets that were planned for the Spring. Kristin was very excited, and had a hard time falling asleep.

After awhile, Kristin fell asleep. Even though she was asleep, she could not stop thinking about the next day. Soon, she began to dream, and in her dream all the water in Texas disappeared. In her dream, Kristin was very sad, because there was no water for swimming, no **AquaSMART** Team, and no Spring swim meets.

Luckily, Kristin was only dreaming. The next morning, there was water for brushing her teeth, her father's coffee, and the dog's water bowl. But what if it hadn't been a dream? What would Texas look like if there was no water in the state?

AquaCOPY

Name: _____ Date: _____

TEXAS WATERWAYS WORKSHEET 1

FIRST AquaCLUE

How Much Water Do I Need?

Start: Date _____ Time _____ to _____ **Finish:** Date _____ Time _____

I Use Water For:	*Number of Times a Day*	*Water Used*	*Total Gallons*

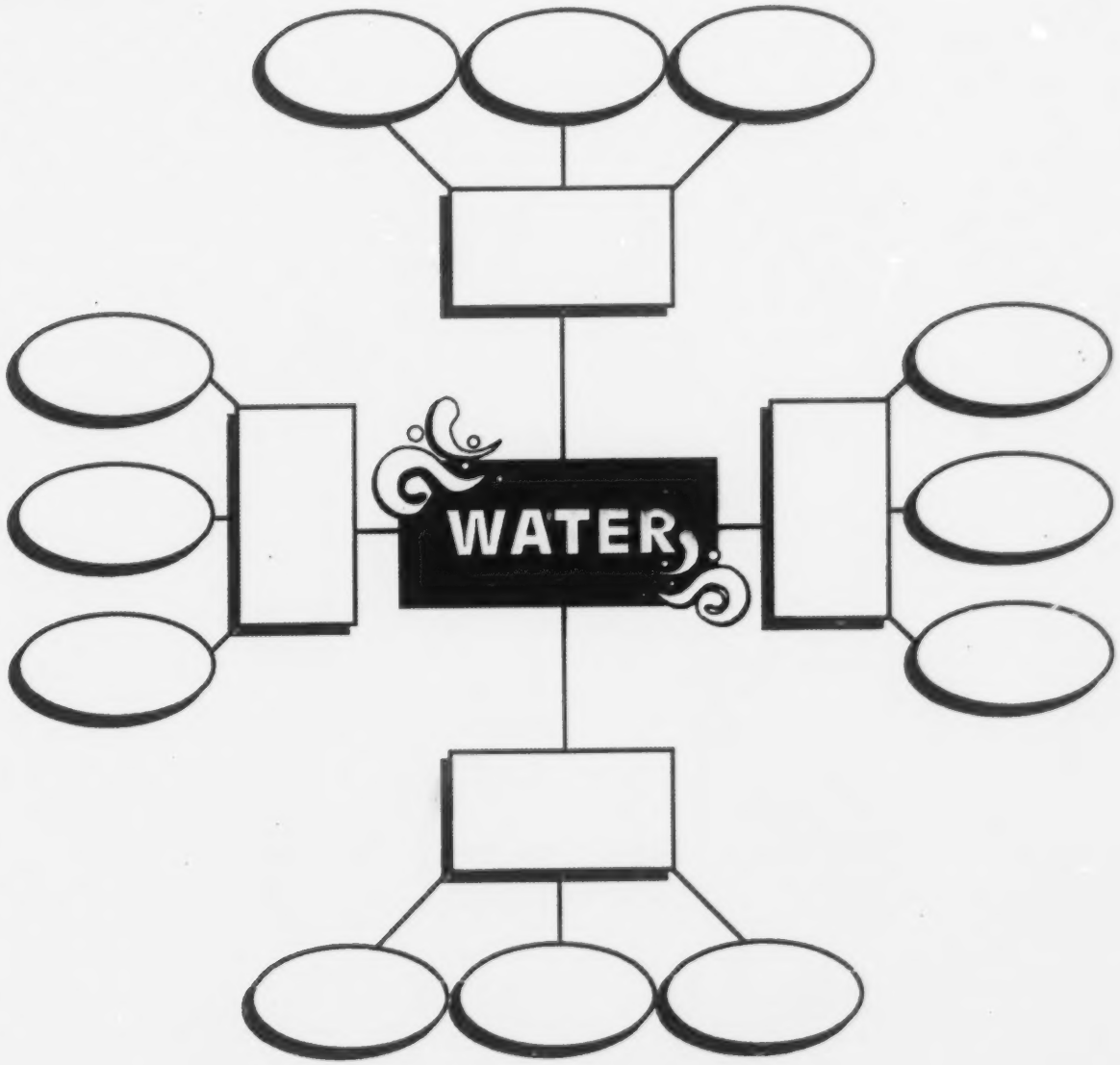
AquaCOPY

Name:_____ Date: _____

TEXAS WATERWAYS WORKSHEET 2

SECOND AquaCLUE

What Does Texas Look Like?



AquaCOPY

Name:_____ Date: _____

TEXAS WATERWAYS WORKSHEET 3

THIRD AquaCLUE

Who Came To Texas?

Who Came to Texas?	*Where Did They Come From?*	*How Did They Get Here?*	*What Role Did Water Play?*
Sea Explorers			
Fur traders			
Railroad workers			
Farm workers			
Ranchers			
Others			

AquaCOPY

Name:_____ Date: _____

TEXAS WATERWAYS WORKSHEET 4

FOURTH AquaCLUE

Boating Accidents—Make A Graph[1]

Type of Accident	Percent of Accidents
Collision with other Vessels	37.5%
Collision with an Object	15.7
Other types of Accidents	12.5
Flooding/Sinking	8.7
Falls Overboard	7.9
Capsizing	7.2
Grounding	5.7
Fires/Explosions	4.8
Total	**100.0%**

Answer the following questions:

1. Build a graph.

2. What are the most common type of accidents?_____

_____

_____

3. What percent of boating accidents are caused by capsizing? _____

_____

_____

4. What percent of boating accidents are caused by falling overboard?_____

_____

_____

5. What is the least common type of accidents? _____

_____

_____

6. What do you think may be a major cause of accidents?_____

_____

_____

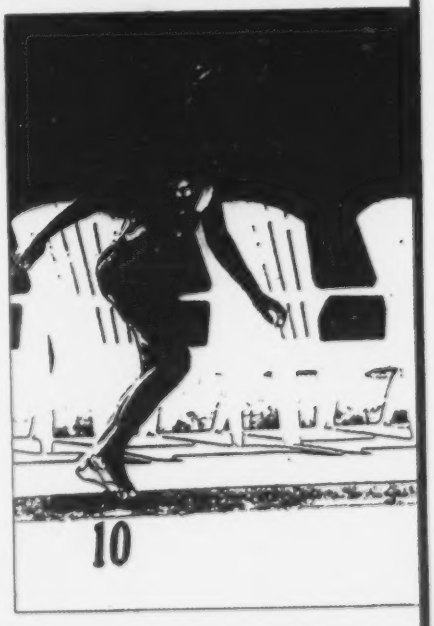
1 Data from U.S. Department of Transportation, U.S. Coast Guard, *Boating Statistics 1993, Teach Safe Boating by Example*, Washington D.C., 1994, p. 13.

AquaCOPY

THE BIG MISTAKE

The **AquaSMART** Team is playing around the swimming pool at Kristin's house. Kristin's mother is sitting at the poolside, reading and watching the Team. When the Team becomes tired of playing in the water, the Team members climb out of the pool to sit in the sun. Kristin's mother goes into the house to get some treats for the Team. Before going into the house, Kristin's mother asks the Team to stay out of the water until she returns.

While Kristin's mother is in the house, the Team members begin to chase each other around the pool, running toward the deep end of the pool. In their excitement, Shavannah and Justin jump into the deep water. They did not notice the 10 ft. sign marking the pool depth. Because she cannot swim very well yet, Shavannah begins to panic when she realizes her feet do not reach the bottom. What rules should the **AquaSMART** Team have learned before this happened?



AquaCOPY

Name: _____ Date: _____

LESSON 1, WORKSHEET 1

FIRST AquaCLUE

HOW DID I LEARN

The reporter asks the questions and jots down the responses on the worksheet.

Name of person being interviewed: _____

Name of person reporting: _____

1. Tell me about something you know how to do really well–something that you are an expert at doing.

_____

_____

_____

2. When did you learn to do it? _____

_____

_____

_____

3. Who helped you learn? _____

_____

_____

_____

4. Was it hard or easy for you to learn? _____

_____

_____

_____

5. How did you feel when you learned to do it? _____

_____

_____

_____

6. Have you taught anyone to do this? _____

_____

_____

AquaCOPY

Name:_____ Date: _____

LESSON 1, WORKSHEET 2

SECOND AquaCLUE

LEARN TO SWIM DIRECTORY

PLACES TO LEARN TO SWIM

Name: _____

Where: _____

Phone Number: _____

Name: _____

Where: _____

Phone Number: _____

Name: _____

Where: _____

Phone Number: _____

Name: _____

Where: _____

Phone Number: _____

Name: _____

Where: _____

Phone Number: _____

AquaCOPY

Name:_____ Date: _____

LESSON 1, WORKSHEET 3

FOURTH AquaCLUE

WATER WORD PUZZLE

For each category in the left column, find a word beginning with each letter of W-A-T-E-R and write it in the correct blank. Try not to use a word more than once. Some blanks are already done for you. Find words in the word bank for the other squares.

	W	A	T		
Rivers		Avoid Rocks			
Oceans			Tide		
Pools					
Lakes					Rowing
Bayou	Warning!				

WORD BANK

Rafting
Wild Currents
Eddy
Warning
Walk
Anemones
Waves
Toys
Act Safely
Tides
Exercise Care
Avoid!
Take A Pal
Edge
Rubber Ducky
Risk
Trespassing
Enter Carefully
Risk!
Riptides

AquaCOPY

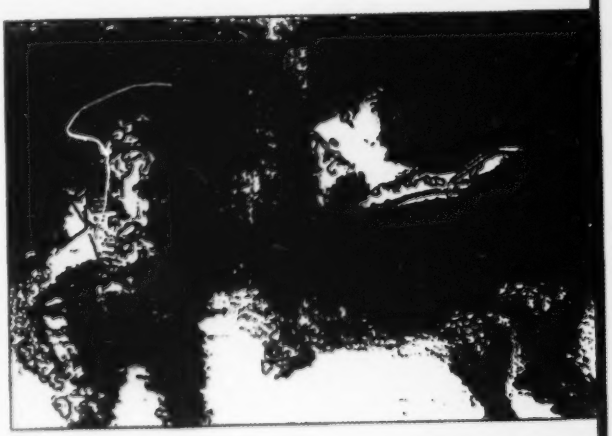
Name:_____ Date: _____

TAKING A RISK

The **AquaSMART** Team, Shavannah, Justin, Andre, and Kristin have been taking swimming lessons and practicing what they learned almost every day. By mid-summer, all the Team members were good swimmers.

One day the **AquaSMART** Team decided to go rafting on the river. The **AquaSMART** Team had never been rafting before, but it looked like fun and, because the Team knew they could swim, they did not think it would be dangerous. They brought along their lunch and towels, but they did not bring along their life jackets. They did not think the raft was a boat.

The river was swift, but smooth, and the Team was having fun. Soon, they reached a part of the river where it was very rocky. The water began to move faster, and the Team could not avoid the rocks. Their lunch and towels were washed overboard. All of a sudden, the raft got caught in an eddy*, and Justin fell off the raft. How could the Team have avoided this situation?



* An eddy is a current of water moving in the opposite direction of the main stream or movement of a river or ocean.

AquaCOPY

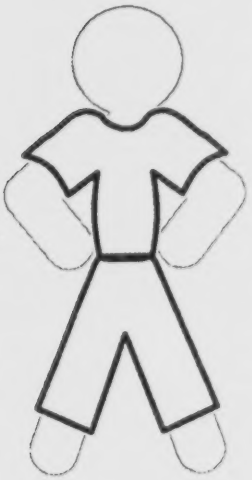
Name:_____ Date: _____

LESSON 2, WORKSHEET 1

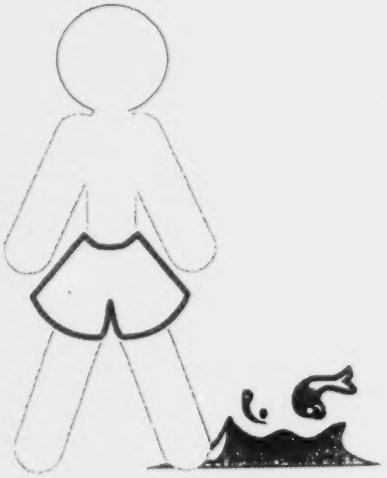
FIRST AquaCLUE

DRAW THE EQUIPMENT

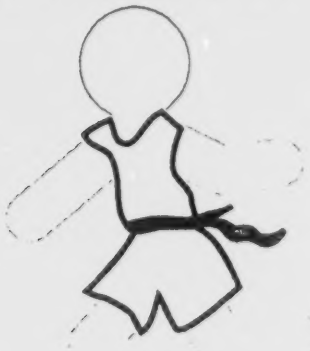
FIREMAN



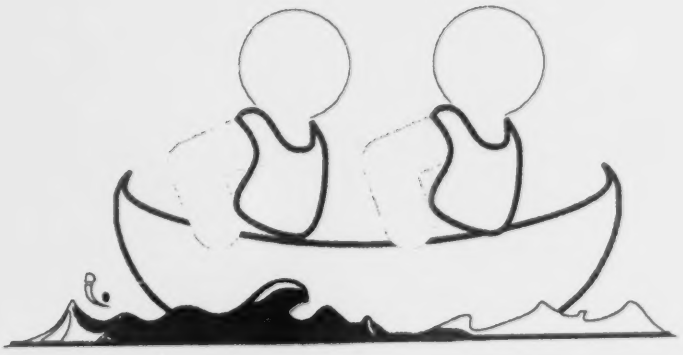
SCUBA DIVER



ROLLER BLADES



CANOE RIDERS



AquaCOPY

Name:_____ Date: _____

LESSON 2, WORKSHEET 2 LIFE JACKET MAP

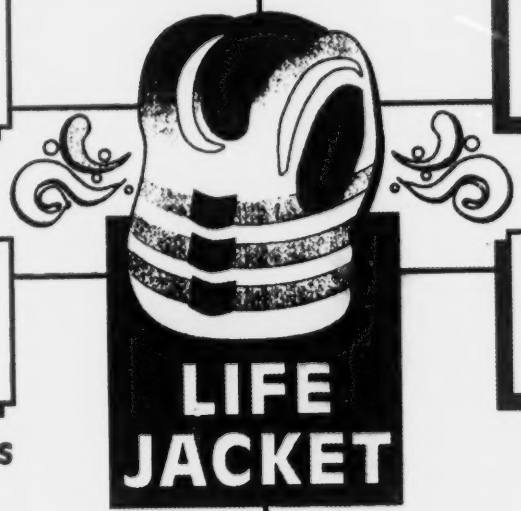
THIRD AquaCLUE

SEE HOW MUCH YOU REMEMBER ABOUT LIFE JACKETS BY FILLING IN EACH OF THE BLANK BOXES

Who wears it?

How to tell if it is a good one

When/Where to use it?



How to know it fits

Why use it?

What NOT to use in place of a life jacket

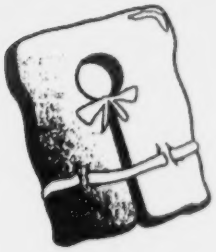
AquaCOPY

Name:_____ Date: _____

LESSON 2, WORKSHEET 3 FLOTATION DEVICES

FOURTH AquaCLUE

CIRCLE THE COAST GUARD-APPROVED FLOTATION DEVICES



LIFE VEST

AIR MATTRESS

BEACH BALL

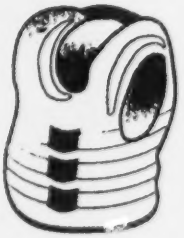
HORSESHOE BUOY

TOY HORSE

WATER WINGS

BUOYANT CUSHION

LIFE JACKET



RING

RUBBER DUCKY

AquaCOPY

Name:_____ Date: _____

LESSON 2, WORKSHEET 4 TEXAS BOATING LAW

FIRST AquaNET

PERSONAL FLOTATION DEVICE (life jackets) REQUIRED FOR CHILDREN

(a) A motorboat must have at least one life preserver, life belt, ring buoy, or other device of the sort prescribed by the regulations of the commandant of the Coast Guard for each person on board, so placed as to be readily accessible.

(b) A motorboat carrying passengers for hire must have a readily accessible life preserver of the sort prescribed by the regulations of the commandant of the Coast Guard for each person on board.

(c) The operator of a class A or class 1 motorboat, while underway, shall require every passenger under 13 years of age to wear a life preserver of the sort prescribed by the regulations of the commandant of the Coast Guard. A life belt or ring buoy does not satisfy this requirement.

Parents: it is a good idea for all children to wear a properly fitted, U.S. Coast Guard-approved life jacket whenever they are in a boat, near unknown or dangerous water, or swimming in water **WHERE THERE IS NO LIFEGUARD.**

Family Member Signature: _____

AquaCOPY

Name:_____ Date: _____

A SLIP OF THE FOOT

Kristin and her parents are on the boat dock. Kristin's father is working on their boat, and her mother is helping him. Kristin is playing on the dock. She did not intend to go into the water, so she wasn't wearing her life jacket. The dock was slippery and, as Kristin was playing along the edges, she slipped and fell into the water. The water is too deep, and Kristin cannot stand. She cannot reach the stairs or find anything to help her climb back up on the dock. What should she do?

AquaCOPY

Name:_____ Date: _____

LESSON 3, WORKSHEET 1 RESCUE YOURSELF

FOURTH AquaCLUE

A SLIP OF THE FOOT

Kristin and her parents are on the boat dock. Kristin's father is working on their boat, and her mother is helping him. Kristin is playing on the dock. She did not intend to go into the water, so she wasn't wearing her life jacket. The dock was slippery and, as Kristin was playing along the edges, she slipped and fell into the water. The water is too deep, and Kristin cannot stand. She cannot reach the stairs or find anything to help her climb back up on the dock. What should she do?

Write a happy ending.

Rewrite the story so that Kristin prevents a dangerous situation.

AquaCOPY

Name:_____ Date: _____

LESSON 3, WORKSHEET 2

SECOND AquaNET

FAMILIES, TEACH YOUR CHILDREN TO RESCUE THEMSELVES

Families: Your children are learning boating and water safety rules in school. They are learning rules for preventing accidents, and rules for being prepared in case an accident occurs. Please go over these rules with your children. Then help your children answer the questions and encourage the children to bring the worksheet back to school so they can share with the other students.

PREVENTION

AquaRULEs

Don't run on the dock, or near the pool, or around dangerous water.
Don't push other students into the water.
Wear your life jacket.
Be sure a responsible adult is close by, practice the buddy system, or tell someone where you are going.
Look for signs and obey them.

PREPARATION

AquaSKILLs

Stay afloat.
Remain calm.
Keep your head above water.
Be an observer.

Preparation

Float, tread water, swim.
Think about how to rescue yourself.
Don't thrash about, move arms and legs in slow circles.
Look around for something nearby that floats and is big enough to keep you afloat.
Look to see if someone is nearby.
If you can see someone, yell for help. If no one is close by, don't yell, save your strength.
Look for the closest safe place—a boat, the dock, land. Try to move yourself toward that location.

All children should know how to swim, float, and tread water. To teach these skills to your children, please contact the following:

Teach your children to dial 911 for help.

Accredited swimming instructor: _____

Where did you learn to swim? _____

Who taught you? _____

How old were you when you learned to swim? _____

AquaCOPY

Name: _____ Date: _____

NOT A MINUTE TOO SOON

The **AquaSMART** Team is attending a birthday party at Shavannah's house. It's raining outside, so the Team is inside, playing games. Shavannah's mother is in the kitchen, putting the candles on the cake. Andre looks out the window, and sees something in the swimming pool. He runs outside to find that Shavannah's little sister, Eryn, is in the water. Eryn cannot swim. Andre can see that this is an emergency situation, and that he must do something at once. What should Andre do?

AquaCOPY

Name:_____ Date: _____

LESSON 3, WORKSHEET 2

SECOND AquaNET

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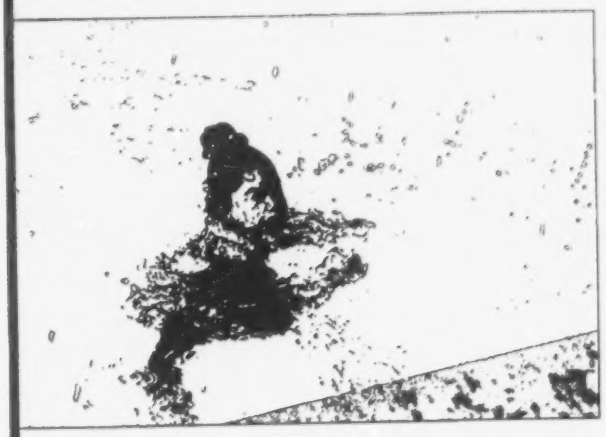
AquaCOPY

Name: _____ Date: _____

NOT A MINUTE TOO SOON



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AquaCOPY

Name:_____ Date: _____

LOOK BEFORE YOU LEAP

It was a hot summer day, and Justin and Andre were trying to decide what to do. Andre told Justin that he heard his older brother and friends talking about swimming in the canal, just outside of town. They were talking about how they took along an air mattress and floated downstream. Justin and Andre decided to go for a swim in the canal. They did not tell Justin's mother because they were afraid she would not let them go.

When Justin and Andre reached the canal, they noticed a sign that said "No Trespassing". Since it did not say, "No Swimming", the boys were not sure if it was safe to go swimming or not. They used their **AquaVISION** and saw junk at the bottom of the canal. If you were with Andre and Justin, what would you have done?

AquaCOPY

Name: _____ Date: _____

LESSON 5, WORKSHEET 1 PICTURES AND WORDS

FIRST AquaCLUE

Before early people could write they communicated with pictures. Even today we use pictures, signs and symbols to communicate. Many of the signs are used worldwide.

See if you can tell what the following symbols and signs communicate to us.

Did you find the following:

Taxi	Handicap	First Aid	HELP!
No Smoking	Restaurant	Elevator	Bus
Telephone	Information	Coffee Shop	Helicopter
Air Transportation	Mail	OK In The Water	No Parking
Women's Restroom	Men's Restroom		

AquaCOPY

Name:_____ Date: _____

LESSON 5, WORKSHEET 2 KNOW THE DANGER WORDS

SECOND AquaCLUE

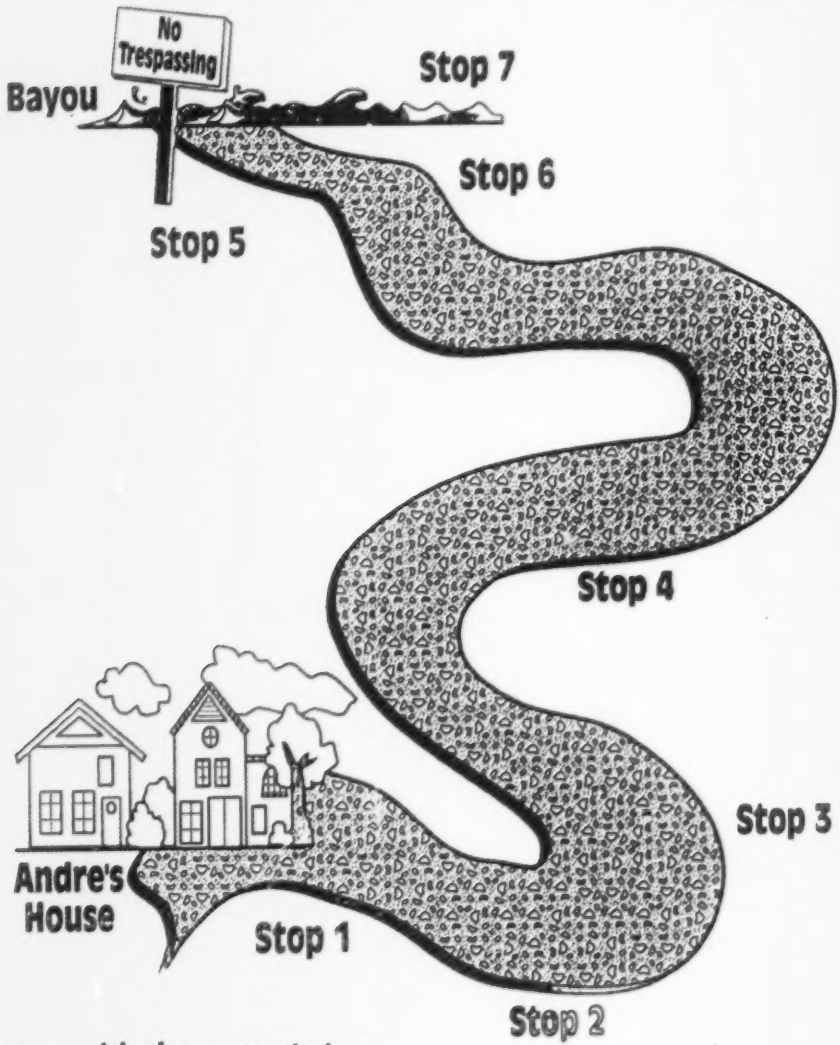
DANGER WORDS	WHAT DO THEY MEAN?
No Fires	
No Swimming	
No Trespassing	
No Smoking	
Danger	
Deep Water	
Flammable	
Polluted	
Caution	
High Voltage	
Don't Drink	
Gasoline	

AquaCOPY

Name: _____ Date: _____

LESSON 5, WORKSHEET 3 DECISION MAP

THIRD AquaCLUE



Match the letters with the correct stop.

A. Andre and Justin do not tell anyone where they are going.
B. Andre and Justin see a no trespassing sign.
C. Andre and Justin decide to go to the bayou.
D. Andrea hears his brother talking about swimming in the bayou.
E. Andre and Justin decide not to swim.
F. Andre and Justin set off for the bayou.

Draw Andre and Justin on the story map.

AquaCOPY

Name:_____ Date: _____

LESSON 5, WORKSHEET 4 PARLEY GARFIELD AND THE FROGS

FOURTH AquaCLUE

Now when my grandpa, Parley Garfield, was a boy
He had to cross the crick to see my grandma every night.

Most times in the summer when the cricks run dry
he could just *walk* across on the flat rocks.

But in the spring when the hard rains came that crick would flood.

Then he'd come down to the edge of the crick
and he wouldn't know whether or not it was too deep to wade through.

Now there was a family of frogs that lived at the place where the crick pooled there.
And they'd come along and help him out. Grandpa'd call out to the frogs:
"How DEEP is it?
How DEEP is it?
How DEEP is it?"

Now the little ones at the edge of the crick they'd call back:
"Ankledeep!
Ankledeep!
Ankledeep!"

So Grandpa'd take off his shoes and wade in a bit.
Out a little further the frogs grew a little bigger. Grandpa'd call to them:
"How DEEP is it?
How DEEP is it?
How DEEP is it?"

And that bunch of frogs would call right back:
"Kneedeep!
Kneedeep!
Kneedeep!"

So Grandpa, he'd roll up his pants legs and wade in a little more.
Then he'd call to the big old frogs way out toward the middle.
"How DEEP is it?
How DEEP is it?
How DEEP is it?"
Bellydeep!
Bellydeep!"

Grandpa wanted to see grandma awfully bad.
So he'd just wade right on in up to his belly and get all wet. Then he'd stop.
And Grandpa'd call out to that old Granddaddy Bullfrog who lived right out in the middle of the pond:
"How DEEP is it?
How DEEP is it?
How DEEP is it?"

And that old Granddaddy Bullfrog'd bellow back:
"YOU BETTER GO ROUND!
YOU BETTER GO ROUND!
YOU BETTER GO ROUND!"

Then Grandpa knew he'd have to go round and find another place to forc the crick *that* night
if he wanted to see Grandma at all. I've heard my grandpa tell that story many a time.

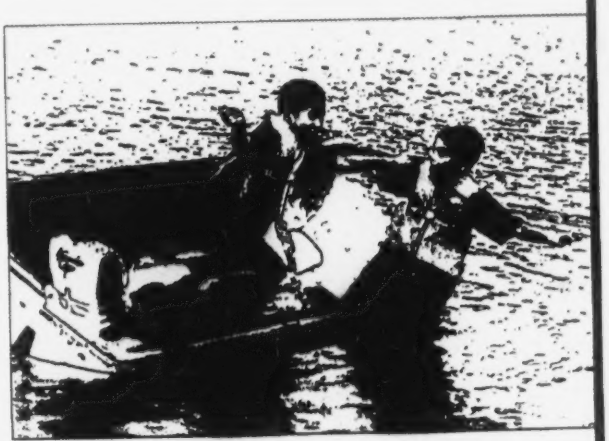
Reprinted from "Twenty Tellable Tales," Margaret Read MacDonald, H.W. Wilson (1989)

AquaCOPY

Name:_____ Date: _____

AN UNFORTUNATE DAY

The **AquaSMART** Team was invited to Lora's cabin at the lake. The Team decided to go down by the lake and play in the boat tied to the dock. The Team gets into the boat, pretending they are sailing away. The boat begins to move away from the dock and Justin, who is standing up, loses his balance and falls into the water. As Lora reaches out to help Justin the rest of the Team go to Lora's side of the boat to help. The added weight of all the Team members on Lora's side of the boat makes it tip, dumping the boys into the water. What did the Team do wrong?



AquaCOPY

Name:_____ Date: _____

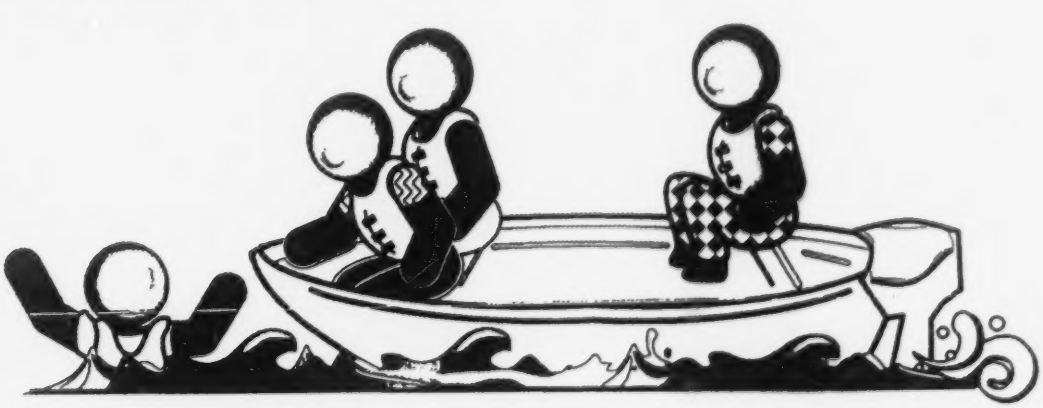
LESSON 6, WORKSHEET 1

FIRST AquaCLUE

BALANCE — COUNTER-BALANCE

1. Draw 2 boaters.
2. Place them so the boat is balanced.
3. Be sure the boaters are wearing life jackets
4. Color the life jackets orange.

1. Circle the boater reaching into the water.
2. Draw an arrow to the seat where another boater should move to counter-balance the boat.



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Name:_____ Date: _____

LESSON 6, WORKSHEET 2

SECOND AquaCLUE

FORTUNATELY — UNFORTUNATELY

- Read *Fortunately, Unfortunately,* by Remy Charlip.
- Think of a time when something you did started out fun but ended up being quite different.

Fortunately, one day I _____

_____

_____

_____

Unfortunately, _____

_____

_____

_____

Fortunately, _____

_____

_____

_____

Unfortunately, _____

_____

_____

_____

But fortunately, _____

_____

_____

_____

AquaCOPY

Name:_____ Date: _____

LESSON 6, WORKSHEET 3

THIRD AquaCLUE

CAPACITY — SAFETY IN NUMBERS

PLACE	REASONS TO LIMIT

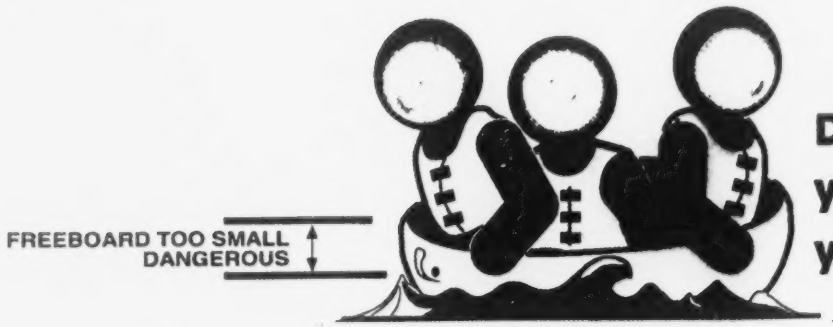
AquaCOPY

Name: _____ Date: _____

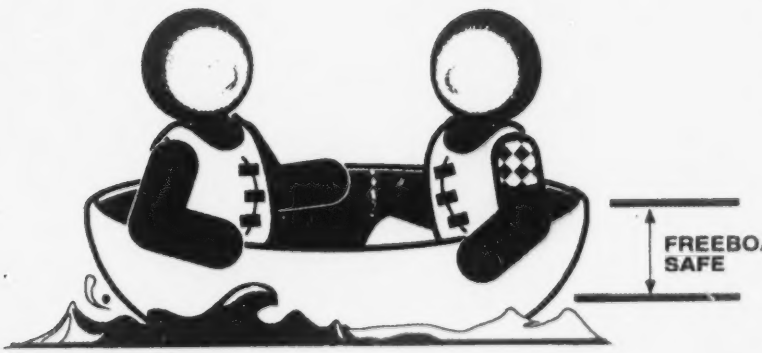
LESSON 6, WORKSHEET 4

FOURTH AquaCLUE

DON'T SINK YOUR BOAT



Don't overload – you'll sink your boat !



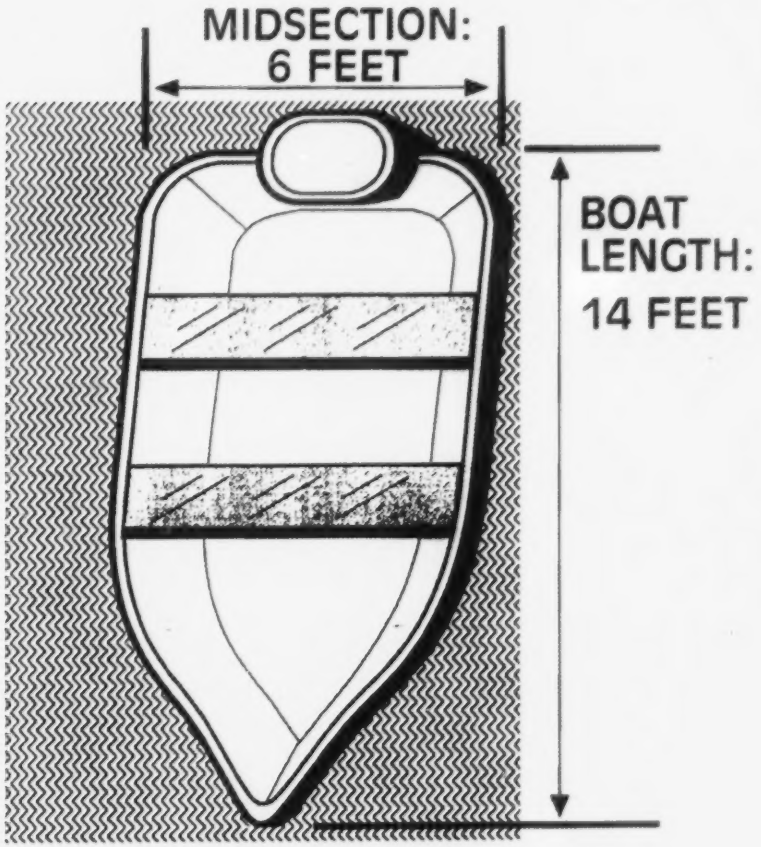
AquaCOPY

Name:_____ Date: _____

LESSON 6, WORKSHEET 5

FOURTH AquaCLUE

DIAGRAM FOR CALCULATING THE CAPACITY OF A BOAT



$$\frac{\text{Boat Length} \times \text{Boat Width}}{15} = \text{Number of Occupants}$$

Students, write in the correct numbers:

$$\frac{(\text{Boat Length}=\_\_\_\_) \times (\text{Boat Width}=\_\_\_\_)}{15} = \text{Number of Occupants} \_\_\_\_$$

AquaCOPY

Name:_____ Date: _____

LESSON 6, WORKSHEET 6

FIRST AquaNET

CAPACITY PLATE INFORMATION

U.S. COAST GUARD CAPACITY INFORMATION

MAXIMUM HORSEPOWER _____

MAXIMUM PERSONS CAPACITY (POUNDS) _____

MAXIMUM WEIGHT CAPACITY (PERSONS, MOTOR & GEAR) (POUNDS) _____

THIS BOAT COMPLIES WITH U.S. COAST GUARD SAFETY STANDARDS IN EFFECT ON THE DATE OF CERTIFICATION

MANUFACTURER: HAPPY BOAT CO.

COLUMBIA, MICHIGAN

MODEL: 838

COMPLIANCE WITH THE FOLLOWING U.S. COAST GUARD REQUIREMENTS AND/OR BIA RECOMMENDATIONS IS VERIFIED

LOAD AND HP CAPACITY ● BASIC FLOTATION
NAVIGATION LIGHTS ● STEERING SYSTEM
COMPARTMENT VENTILATION

BOATING INDUSTRY ASSOCIATIONS

AquaCOPY

Name:_____ Date: _____

AN UNEXPECTED SPILL

Lauren and Andres decide to go sailing in Lauren's sailboat. Lauren tells her mother that she and Andres are going out in the sailboat and that they expect to be home in about two hours.

The boat is just big enough for the two of them. Before Lauren and Andres get into the sailboat, they put on their life jackets. As they get into the boat, they are careful to sit so that the boat is balanced.

Lauren is a good sailor. The lake is calm but the wind is brisk. Soon she and Andres are far from shore. Suddenly, there is an unexpected gust of wind, and the sailboat capsizes. Lauren and Andres are thrown into the water. What do you think they should do?

AquaCOPY

Name:_____ Date: _____

LESSON 7, WORKSHEET 1

FIRST AquaCLUE

STAY WITH YOUR BOAT

_____ The wind is brisk and the boat is in the middle of the lake.

_____ Lauren and Andres are thrown overboard.

_____ Lauren and Andres go down to the dock and put on their life jackets.

_____ A sudden gust of wind blows the boat over.

_____ Lauren tells her mother that she and Andres are going sailing and will be back in two hours.

_____ Lauren and Andres climb into the boat, being careful to keep it balanced.

_____ Lauren and Andres swim back to the boat and stay there until rescued.

AquaCOPY

Name:_____ Date: _____

LESSON 7, WORKSHEET 2

SECOND AquaCLUE

WATER TIPS

Water Characteristic/Activity	POOL	RIVER	LAKE	OCEAN
Fast current				
Deep water				
High waves				
Undertow				
Can see the bottom				
Rough water				
Big rocks in the water				
Sandy beaches				
Good for sailing				
Good for water skiing				
Good for fishing				
Can be dangerous				

Write some of the water safety rules for each body of water. _____

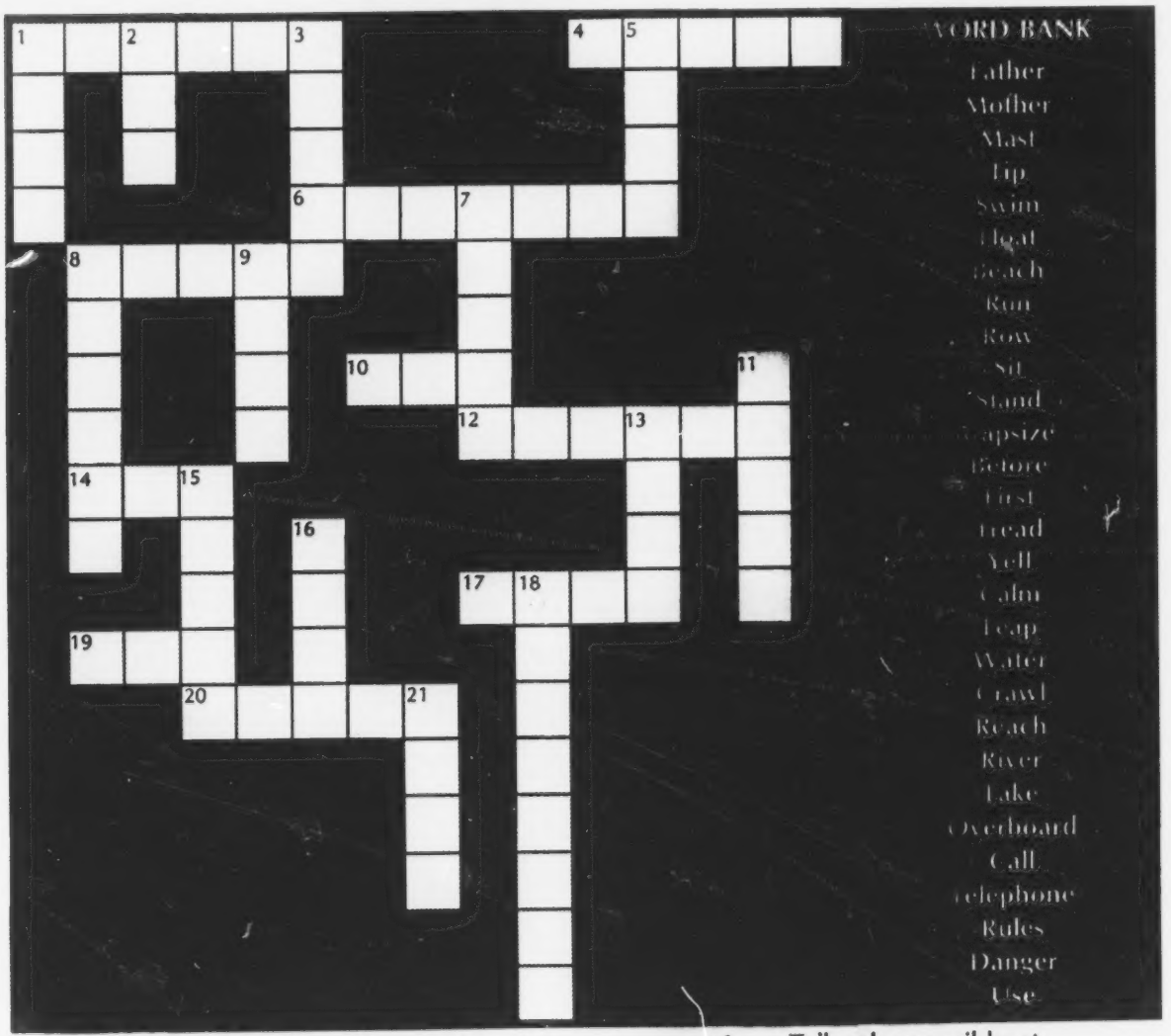
AquaCOPY

Name: _____ Date: _____

LESSON 7, WORKSHEET 3

THIRD AquaCLUE

CROSSWORD PUZZLE



AquaCLUEs:

ACROSS

1. Responsible adult.
4. Learn to _____.
6. Tip.
8. Sandy area.
10. Walk fast.
12. Sign.
14. Reach, Throw, or _____.
17. Water vehicle.
19. _____ a life jacket.
20. Safety_____.

DOWN

1. Tall pole on sail boat.
2. Capsize a boat.
3. _____ , Throw, or Row.
5. _____Tahoe.
7. Do not do this in a Boat.
8. Look _____ you leap.
9. If your boat capsizes, stay_____.
11. Learn to _____water.
15. Place to swim.
16. _____ 911.
18. Too many people in a boat.
21. Learn to _____.

AquaCOPY

Name:_____ Date: _____

LESSON 7, WORKSHEET 4

FOURTH AquaCLUE

ANYTHING CAN HAPPEN

Emergency or Accident	*Prevent*	*Prepared*
Boat Capsizes		
Slips/falls in the Swimming Pool		
Runs/Falls off the Dock		
Falls off a River Raft		
Not Able to Climb out of a Canal or Bayou		
Cut Feet on Broken Glass		

AquaCOPY

Name:_____ Date: _____

A VISIT FROM THE COAST GUARD

Mrs. Johnson's class was very excited. Today, a member of the U.S. Coast Guard Auxiliary was coming to visit the class to tell the students about the boating rules of the road. The students had been studying some of the safety rules in their class and they were eager to learn more.

The Coast Guard Auxiliary member arrived at 10 a.m. She brought coloring books, games, and posters for the class. She told the students that safety rules applied to boating just as they applied to automobiles, and that the rules made it safer for everyone. She told the students that they must wear a life jacket, a rule the students already knew. She also told them that the students had to be 13 years old or pass an approved boating safety course before they could operate a boat. The students knew that rule, too.

Finally, the Coast Guard Auxiliary member told the students that there were rules that governed the operation of a boat. "In some ways," she said, "driving a boat is like driving a car." The **AquaSMART** Team was surprised because they had never heard anyone say that. They thought all you had to do was step on the gas and steer.

The Coast Guard Auxiliary member explained some of the rules that the students could learn and watch for while they were out on the water. The rules applied to passing, crossing, and meeting other boats, reading buoys, and listening to weather reports. Can you guess what some of the rules are, and why they are important?

AquaCOPY

Name:_____ Date: _____

LESSON 8, WORKSHEET 1

FIRST AquaCLUE

BOATING RULES OF THE ROAD

1.	Boating rules of the road	_____	Each should go to the right.
2.	Five short toots means	_____	I'm going to the right.
3.	One short toot means	_____	Short toot once.
4.	Two short toots means	_____	When they meet motorboats.
5.	When crossing, the boat to the right	_____	Waterway marker.
6.	If you want to pass on the right	_____	Danger.
7.	If you want to pass on the left	_____	Safe water, slow speed zones, and swimming areas.
8.	Sailboats have the right of way	_____	Warns of danger.
9.	A buoy is a	_____	I'm going to the left.
10.	Buoys show	_____	Listen to the weather report.
11.	A foghorn	_____	Has the right of way.
12.	For safety	_____	Two short toots.
13.	When two boats meet	_____	Apply to all boats.

AquaCOPY

Name:_____ Date: _____

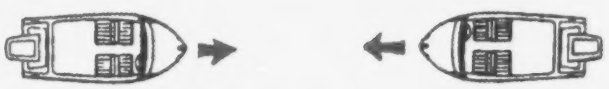
LESSON 8, WORKSHEET 2

SECOND AquaCLUE

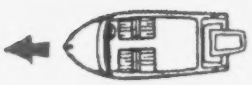
MEETING, CROSSING, AND PASSING

Meeting

Draw dotted lines showing the appropriate direction for each boat.



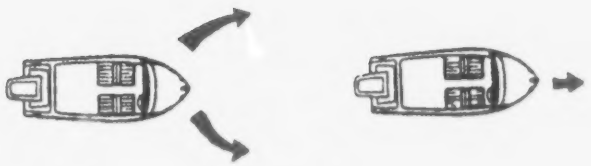
Crossing



One boat is trying to cross in front of the other. Draw a dotted line showing which boat has the right-of-way.

Passing

One boat wants to pass the other. Draw a dotted line showing the boat passing on the correct side.



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Name:_____ Date: _____

LESSON 8, WORKSHEET 3

THIRD AquaCLUE

HOW MANY TOOTS?

How many toots?

Boat action	*Circle the correct number of toots.*				
Danger	1	2	3	4	5
Pass to the right	1	2	3	4	5
Pass to the left	1	2	3	4	5

1. Why is it important for boats to signal that they want to pass? _____

_____

_____

2. What is the signal for cars that want to pass? _____

_____

_____

3. Why is it important for boats to signal danger? _____

_____

_____

4. What are some dangerous events that could happen? _____

_____

_____

5. Do cars have danger signals? What are they? _____

_____

_____

AquaCOPY

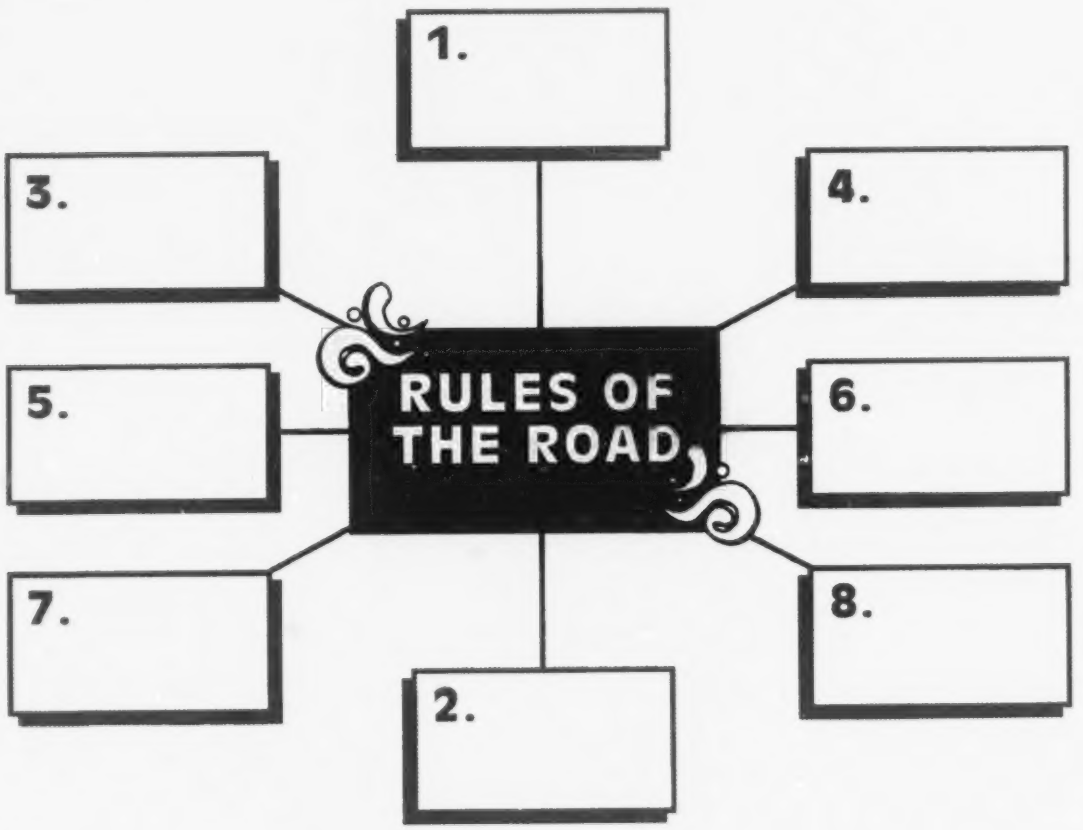
Name:_____ Date: _____

LESSON 8, WORKSHEET 4

FOURTH AquaCLUE

THE WORD WEB

BOATING RULES OF THE ROAD



Hints: _____

1. How old must I be to operate a motor boat?
2. What I must wear when I go riding in a boat.
3. What I should listen to before I go boating.
4. What are buoys?
5. When passing a motor boat, what kind of boat has the right-of-way?
6. To what kinds of boats do the boating rules of the road apply?
7. Who should learn to swim?
8. Always pass to the _____ of another boat.

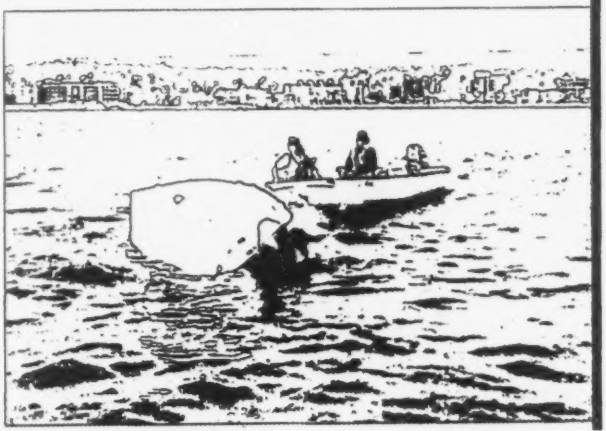
AquaCOPY

Name:_____ Date: _____

THE RIGHT CHOICE

Lora asks the **AquaSMART** Team members to go out on her older brother's boat for the day. The Team members put on their life jackets, and jump in the car, waiting for Lora's brother to drive them down to the dock. The Team is very excited because the boat has a galley, beds, and an on-board bathroom. Most of the Team members had never been on a boat that big.

On the way to the lake, Lora's brother and his friends stop to purchase a couple cases of beer at the mini-mart. The Team remembers that it is not safe to drink or use drugs while driving. Do you think the Team could be in danger? If the Team believes they are in danger, what can they do about it?



AquaCOPY

Name:_____ Date: _____

LESSON 9, WORKSHEET 1

FIRST AquaCLUE

PLANNING A BIRTHDAY PARTY

Item	*Where to Purchase*	*Cost of Item*

AquaCOPY

Name: _____ Date: _____

LESSON 9, WORKSHEET 2

FIRST AquaCLUE

BIRTHDAY PARTY SHOPPING LIST

Party Item	Cost
Party Favors	$1.50 ea.
Candy	$2.95 bag of 75
Cake Mix	$1.49
Cake Icing	$1.35
Ice Cream	$2.89
Paper Plates	$2.57
Paper Cups	$2.55
Paper Table Cloth	$3.95
Paper Napkins	$1.29
Party Decorations	$6.50
Balloons (4)	$2.19 ea.
Soda (3 bottles)	$1.89 ea.
Party Invitations (8)	$1.95
Bakery Cake	$15.00
Bakery Cupcakes	$10.00 one dozen
Go to a Movie (8)	$32.00
Order Pizza (2 large)	$16.00
Piñata	$6.00
Magician	$25.00
Skating at Rink (8)	$24.00
Video Rental	$3.00 ea.
Popcorn (Large Bag)	$3.50
Hot Dogs (2 Packages)	$4.00
Buns	$4.00
Sidewalk Chalk	$5.00
Velcro Dart Game	$5.50

AquaCOPY

Name:_____ Date: _____

LESSON 9, WORKSHEET 3

SECOND AquaCLUE

QUICK DECISIONS

Event	*Decision*	*Good Consequences*	*Bad Consequences*

AquaCOPY

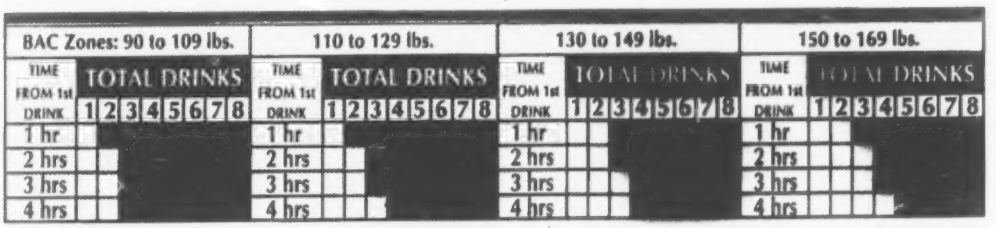
Name:_____ Date: _____

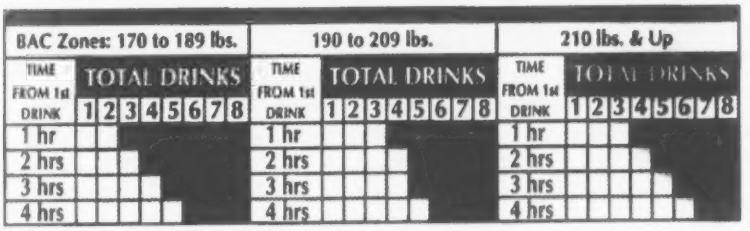
LESSON 9, WORKSHEET 4

THIRD AquaCLUE

DEPARTMENT OF MOTOR VEHICLES

DRIVING UNDER THE INFLUENCE CHART





Shadings in the charts above mean:

- ☐ (.01% - .04%) May be DUI – **Definitely DUI if under 21 yrs. old.**
- ☐ (.05% - .10%) Likely DUI – **Definitely DUI if under 21 yrs. old.**
- ■ (.10% Up) Definitely DUI

Discussion Questions

1. For persons weighing less than 129 pounds, how many drinks does it take to reach the 0.08% BAC?

_____

_____

2. If you are less than 21 years old and weigh less than 129 pounds, how many drinks put you at risk of a DUI?

_____

_____

3. If you are less than 21 years old, weigh less than 129 pounds, and have had a total of 2 drinks, how many hours must pass before you are no longer at risk of a DUI?

_____

_____

AquaCOPY

Name:_____ Date: _____

LESSON 9, WORKSHEET 5

THIRD AquaCLUE

HOW TO BREAK A BAD HABIT

Monkey and Rabbit sat talking. Rabbit twitched his nose. Monkey scratched his back. Rabbit twitched his ear. Monkey scratched his leg. Rabbit twitched his other ear. Monkey scratched his head.

"Would you STOP that TWITCHING," said Monkey.
"What a bad HABIT that is."

"Bad HABIT?" said Rabbit.
"Talk about bad HABITS...Look at YOU.
Scratch...scratch...scratch...
Now that *is* a bad habit."

"Well *I* could easily STOP if I wanted to," said Monkey.
"So could *I*!" said Rabbit.

"We'll SEE!" said Monkey.

"Let's have a contest. The first person to scratch or twitch LOSES.
Begin...when...I...say...GO!"

"ALL RIGHT!"
Rabbit sat very still. Monkey sat very still.

No one could scratch. No one could twitch. It was *very* hard to sit so still.

"Let's tell stories," said Rabbit.
"I'll tell you what happened yesterday."
And Rabbit began to talk.

"Yesterday I walked by the marsh. And mosquitoes came after me.
One bit me *here*." (Rabbit twitched his nose to show where he was bitten.)
"One bit me *here*." (Rabbit twitched his ear.)
"Another bit me *here*." (Rabbit twitched his other ear.)
"And here...and here...and here..." (Rabbit was twitching like crazy.)

"Wait! Wait! *I'll* tell a story!" called Monkey.
"Yesterday *I* was walking in town. And a little boy threw rocks at me.
He hit me *here*." (Monkey scratched his back.)
"He hit me *here*." (Monkey scratched his leg.)
"He hit me *here*." (Monkey scratched his head.)
"And here...and here...and here..." (Monkey was scratching all over.)

"I give up!" said Rabbit.

"Me too!" said Monkey.

Rabbit and Monkey began to laugh. They laughed and laughed.

"After all," they said
"It's very HARD to BREAK A BAD HABIT."

Reprinted from "Twenty Tellable Tales," Margaret Read MacDonald, H.W. Wilson (1989)

AquaCOPY

Name: _____ Date: _____

LESSON 9, WORKSHEET 6

FOURTH AquaCLUE

ALCOHOL & DRUGS

It shall be unlawful for any person to operate any watercraft, vessel, one or more skis, an aquaplane or similar device, upon the waters of this State while such person is intoxicated. (First offense could be punishable, upon conviction, by a fine not to exceed $2,000, confinement in jail not to exceed 180 days or both; second offense a fine not to exceed $4,000, confinement not to exceed one year or both; third offense a fine not to exceed $10,000, imprisonment for not more than 10 years or less than 2 years.) 1996 fines.

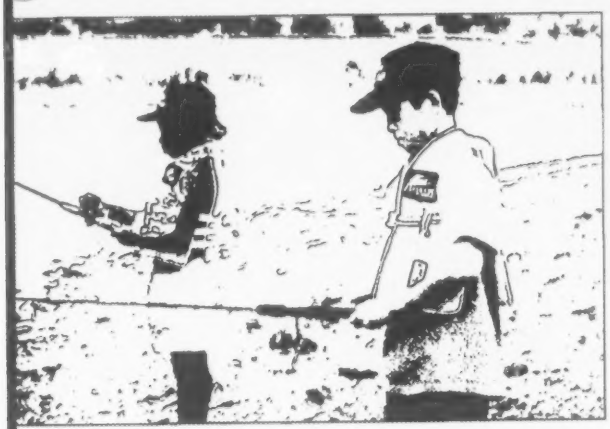
TEXAS PARKS & WILDLIFE

ALCOHOL & DRUGS DON'T MIX WITH BOAT OPERATION

AquaCOPY

Name: _____ Date: _____

HOOK, LINE, AND SINKER!



Ulysses and some of the **AquaSMART** Team members are fishing with Ulysses' father. They are having a good time fishing and boating on the Bay. All of a sudden, Ulysses feels a tug on his line, and quickly pulls up on the pole. His father helps him land a four pound rock cod. Ulysses is very happy and proud.

Ulysses takes the fish off the hook, puts on new bait, and throws the line back into the water, hoping to catch another fish. In his excitement, he becomes careless, and his line becomes tangled with Maria's line. They both struggle, and finally get the tangled mess into the boat. Ulysses cuts the line, and throws the line and the lead sinker into the water.

After the Team catches a few more fish, they decide to stop and eat the picnic lunch that Ulysses and his father packed for the **AquaSMART** Team. They have sandwiches, cans of soda, punch, and cookies wrapped in foil. Ulysses and his father remembered to bring along styrofoam cups, and plastic spoons and forks.

When everyone is finished eating, Ulysses gathers all the trash into a plastic bag, and throws the bag into the water. Do you think that Ulysses has done the right thing? What effect will Ulysses' efforts have on the environment?

AquaCOPY

Name:_____ Date: _____

LESSON 10, WORKSHEET 1

FIRST AquaCLUE

THE DANGEROUS NECKLACE

Directions: teacher is to assist children in this demonstration of how a plastic six-pack can holder can be harmful to a fish.

- Distribute a rubber band to each student.
- Ask students to hold their left hand up in front of their face with the back of their hand facing them.
- Have students use their right hand to hook the rubber band over the "baby" finger of their left hand and stretch it over the thumb of their left hand.
- The rubber band should be taut and resting across the knuckles of the left hand.
- Have students place their right hand on the bottom of their left elbow.
- Now ask students to imaging that they are a fish that has the plastic ring of a six-pack holder around its head. Have students try to free themselves from the rubber band following this rule: Students cannot use their hands, teeth, face or other body parts to help them.
- One or two students may free themselves in 10 to 20 seconds, but most will have difficulty. Discuss how a fish might feel after struggling all morning to free itself.
- Ask children – What can we do to prevent this problem?

Source: *California State Environmental Guide.*

AquaCOPY

Name:_____ Date: _____

LESSON 10, WORKSHEET 2

SECOND AquaCLUE

BE POLITE, DON'T POLLUTE

Ulysses Threw Away	*Harm Caused by Ulysses' Behavior*	*Alternative Action*	*Benefits from Alternative Action*

AquaCOPY

Name:_____ Date: _____

LESSON 10, WORKSHEET 3

THIRD AquaCLUE

WASTE DISPOSAL

Disposal Site		Waste	
A.	Landfill	____	Newspapers and Magazines
B.	Community Recycling Plant	____	Grass Clippings
C.	Solid Waste Disposal	____	Waste Water Tanks from Boats And RVs
D.	Biomass Waste-To-Energy	____	Scrap Lumber, Tree Trimmings
E.	Petroleum Recycling	____	Oil Drained from Automobiles and Boats
F.	Scrap Metal Collector	____	Food Scraps
G.	Compost Pile	____	Aluminum Cans
		____	Glass and Plastic Bottles
		____	Broken and Unusable Items Made of Steel, Iron, Copper, or Bronze
		____	Household Garbage not Recycled
		____	Broken Lead Sinkers

AquaCOPY

Name:_____ Date: _____

LESSON 10, WORKSHEET 4

BONUS AquaCLUE

(1)
YOU WALK BEHIND A FISHERMAN CASTING HIS LINE.
GO BACK 2 SPACES.

(2)
FROM THE DOCK YOU JUMP INTO YOUR INNERTUBE.
MOVE BACK 3 SPACES.

(3)
YOU WALK WHERE A SIGN SAYS NO TRESPASSING.
GO BACK 3 SPACES.

(4)
YOU ARE WEARING YOUR LIFE JACKET. CONGRATULATIONS!
GO AHEAD 5 SPACES.

(5)
YOU SWIM WHERE A SIGN SAYS NO SWIMMING.
GO BACK 4 SPACES.

(6)
YOU TAKE OFF YOUR LIFE JACKET BECAUSE IT'S TOO HOT.
GO BACK 5 SPACES

(7)
YOU STAY CLEAR OF MUDDY WATER WHEN BAREFOOT.
GO AHEAD 4 SPACES.

(8)
YOU WALK KEEPING AWAY FROM THE EDGE OF THE RIVER BANK.
GO AHEAD 2 SPACES.

(9)
YOU BRING A FRIEND ON YOUR WALK BY THE RIVER.
GO AHEAD 2 SPACES.

(10)
YOU WALKED WIDE AROUND A FISHERMAN CASTING HIS LINE.
GO AHEAD 2 SPACES.

(11)
YOU SWIM NEAR WATER SKIERS.
GO BACK 4 SPACES.

(12)
YOU SWIM NEAR WHERE THERE ARE BOATS.
GO BACK 2 SPACES.

(13)
YOU SWIM IN A SWIMMING AREA WITH A LIFEGUARD.
GO AHEAD 2 SPACES.

(14)
YOU WALK ALONE BY THE SIDE OF THE RIVER.
GO BACK 2 SPACES.

(15)
YOU RESCUE A PERSON WHO IS SERIOUSLY HURT JUMPING FROM THE BRIDGE.
GO AHEAD 5 SPACES.

(16)
WHEN SWIMMING, YOU STAY AWAY FROM A FAST CURRENT.
GO AHEAD 3 SPACES.

(17)
YOU WALK IN THE SWIFTLY
MOVING RIVER.
GO BACK 3 SPACES.

(18)
YOU GO OUT ON THE RIVER
ON AN AIR MATTRESS.
GO BACK 4 SPACES.

(19)
FROM THE DOCK YOU CLIMB
DOWN TO THE WATER AND GET
INTO YOUR INNERTUBE.
GO AHEAD 3 SPACES.

(20)
YOU THROW A BUOYANT CUSHION
WITH A ROPE TO A BOY WHO
HAS GONE INTO DEEP WATER.
GO AHEAD 3 SPACES.

(21)
YOU LOCATE THE PHONE AT
THE CAMPGROUND.
GO AHEAD 1 SPACE.

(22)
YOU WALK BAREFOOT INTO
MUDDY WATER.
GO BACK 3 SPACES.

(23)
YOU DON'T KNOW WHERE THE
CLOSEST PHONE IS.
GO BACK 1 SPACE.

(24)
YOU GO OUT ON THE RIVER ON
A PROPER RAFT WITH AN ADULT
WHO HAS EXPERIENCE.
GO AHEAD 4 SPACES.

(25)
YOU WALK TOO CLOSE TO THE
RIVER BANK.
GO BACK 2 SPACES.

(26)
YOU CARRY A LONG STICK WHILE
WALKING ALONG THE RIVER.
GO AHEAD 1 SPACE.

(27)
YOU'RE IN A FAST CURRENT!
YOU FLOAT DOWNSTREAM
WITH YOUR FEET FIRST.
GO AHEAD 5 SPACES.

AquaCOPY

Name:_____ Date: _____

LESSON 10, WORKSHEET 5

BONUS AquaCLUE

AquaFACTS

1. You walk behind a fisherman casting his line and you may get injured with a fish hook. Stay clear.

2. From the dock you jump into your innertube. You may get hurt by the valve stem; that is the piece where you put in the air. Also, you may not know what is under the innertube. Perhaps someone is swimming underwater.

3. You walk where a sign says No Trespassing. You don't know why the owner of the property put up the sign. It may be for your safety or to protect his property.

4. You're wearing your life jacket. Congratulations! The most important thing of all to be safe near the river. If you get caught in swift current or get a cramp swimming, it will keep you afloat and can save your life.

5. You swim where a sign says No Swimming. Usually, this is a dangerous place to swim. Just because you can't see the danger doesn't mean it isn't there.

6. You take off your life jacket because it's too hot. This is a bad thing to do. The life jacket can't save your life if it's on shore or in the bottom of the boat.

7. You stay clear of muddy water when you're barefooted. Good! What if there's a broken bottle under the water and you can't see it?

8. You walk keeping away from the edge of the river bank. This is an especially good thing to do if the bank is above the water. It's muddy there and very easy to slip in and very difficult to get back up. Also, the bank often caves in easily.

9. You bring a friend on your walk by the river. It's a safe thing to do. If anything happens and you fall in the water, your friend can rescue you or go for help.

10. You walked wide around a fisherman casting his line. You won't get injured by a fish hook.

11. You swim near water skiers. If they don't see you, they may run over you or drag their rope over you. Keep far away.

12. You swim near where there are boats. People in the water are very difficult to see. In addition to harm from the boat itself, the boat's propellers are very dangerous.

AquaFACTS (continued)

13. You swim in a swimming area with a lifeguard. This is the safest of all places, especially if you are there with a responsible adult.

14. You walk alone by the side of the river. If anything happens, like slipping and falling in, there is no one there to help you.

15. You rescue a person who is seriously hurt jumping from the bridge. It is very, very dangerous to jump from a bridge regardless of what you have underneath to catch you. People are killed every year this way.

16. When swimming, you stay away from the fast current. Good! It is easy to drift into a dangerous current and suddenly you can't swim against it.

17. You walk in the river. The bottoms of most rivers are full of very slippery rocks and drop-offs. If you slip, the current may push you into the really fast and dangerous part. Stay out of swift moving rivers.

18. You go out on the river with an air mattress. This is OK if you are in a protected swimming area; otherwise, never go into a fast current with swimming pool equipment. It requires a sturdy raft and a lot of strength and experience to handle it.

19. From the dock, you climb down and get into your innertube. Always enter your tube carefully with the valve stem pointing down.

20. You throw a buoyant cushion to a boy who has gone into deep water. If you are in a boat or canoe, keep a buoyant cushion and some small rope on board.

21. You locate the phone at the campground. Good! Anytime you are visiting a place that has dangers, always know where the telephone is *and* know how to dial 911.

22. You walk barefooted into muddy water. What if you stepped on a broken bottle or rusty metal!

23. You don't know where the closest phone is. What if there was an emergency and you couldn't call for help?

24. You go out on the river in a proper raft with an adult who has experience. This is the only way children should go rafting.

25. You walk too close to the river bank. It's muddy and you might slip in. Also, the bank might cave in, dumping you into the water. Either way, it's very difficult to get out.

26. You carry a long stick while walking near the river. If you or your friend falls in, you can reach with the stick for help. Also, the walking stick can help you keep your footing.

27. You're in a fast current. You float downstream with your feet first. This is the proper way to float in a fast-moving stream.

AquaCOPY

Name: _____ Date: _____

LESSON 10, WORKSHEET 6

BONUS AquaCLUE

BINGO CARD

B	I	N	G	O

AquaCOPY

Name: _____ Date: _____

LESSON 10, WORKSHEET 7

SECOND AquaCLUE

MARPOL ANNEX V

The International Treaty to Prevent Pollution from Ships (MARPOL) was created to address the plastic pollution problem. It prohibits the dumping of any plastic into the water anywhere, and restricts the dumping of other forms of garbage within specified distances from shore. Violators of any of the regulations issued to implement Annex V are liable for a civil penalty of up to $25,000 for each violation and criminal penalties of up to $50,000.

AquaCOPY

Name: _____ Date: _____

TEACHER EVALUATION FORM

AquaSMART

Please complete this evaluation form and return to Texas Parks and Wildlife. Your cooperation will help us improve our school curriculum program.

Rate the following items on a scale of 1 to 7, with 7 representing the highest rating, and 1, the lowest. Circle the number that best represents your opinion. Space has been provided for you to add your class-specific comments.

1. Curriculum Format

a. Instructions are clear and easy to follow.	1	2	3	4	5	6	7
b. Activity book is appropriate.	1	2	3	4	5	6	7
c. The suggestions for integrated studies is helpful.	1	2	3	4	5	6	7
d. The written curriculum is a good follow-up of the video.	1	2	3	4	5	6	7

Comments: _____

_____

_____

_____

2. Curriculum Content

a. The content was appropriate for my class.	1	2	3	4	5	6	7
b. It was easy for me to select AquaCLUEs appropriate for my class.	1	2	3	4	5	6	7
c. The activities reinforced the lessons.	1	2	3	4	5	6	7
d. The expanded spelling and vocabulary were a good addition to the curriculum content.	1	2	3	4	5	6	7
e. The literature selections are an important component of the content.	1	2	3	4	5	6	7
f. The family involvement activities were used on a regular basis.	1	2	3	4	5	6	7

Comments: _____

_____

_____

_____

AquaCOPY

Name:_____ Date: _____

STUDENT EVALUATION FORM

AquaSMART

Have students complete the form and return to the Department of Boating and Waterways.

✓ Circle your grade. 3 4 5

✓ Did you like the stories? YES NO

✓ My favorite story: _____

✓ Did you like Splasher? YES NO

✓ Did you like the activities? YES NO

✓ My favorite activity was: _____

_____

_____

✓ Would you like your friends to study these lessons? YES NO

✓ Now that you are AquaSMART, do you think you will be safer when near or in the water?

YES NO

✓ Write down 3 things you learned from the lessons.

_____

_____

_____

3. **Creativity**

a. The theme of the curriculum is pleasing.	1	2	3	4	5	6	7
b. The illustrations are appropriate to the content.	1	2	3	4	5	6	7
c. The graphics enhance the presentation of the curriculum.	1	2	3	4	5	6	7
d. The pictures of the AquaSMART Team help coordinate the written curriculum and the video.	1	2	3	4	5	6	7

Comments:_____

_____

_____

_____

4. **Student Acceptance**

a. Students are able to complete the activities.	1	2	3	4	5	6	7
b. Students participate in the discussions.	1	2	3	4	5	6	7
c. Students respond favorably about the theme, and characters.	1	2	3	4	5	6	7
d. Students have seen the video and are able to connect the video with the written curriculum.	1	2	3	4	5	6	7

Comments:_____

_____

_____

_____

Return to:

TEXAS PARKS AND WILDLIFE
EDUCATION BRANCH
4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744

TEXAS PARKS & WILDLIFE

CERTIFICATE OF ACCOMPLISHMENT

Awarded To:

_____

For Successfully Completing

Fishing SMART

Presented by Texas Parks and Wildlife

Andrew Sansom

Executive Director

_____

Date

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For further information on the AquaSMART series, write to:

Texas Parks and Wildlife
Education Branch
4200 Smith School Road
Austin, Texas 78744

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US Army Corps
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Fort Worth District

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